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ABSTRACT

This publication documents statistical data on technical education and training activities under the purview of the Institute of Technical Education (ITE), Singapore. A list of abbreviations and nomenclature used is included. Section I cites major developments in technical education and training in 1991 and includes diagrams of the former vocational training system and the new technical training system. Section II, on full-time institutional training, provides the following types of data: intake by level, level and sex, level and race, and qualification; average enrollment by level, level and sex, qualification, level and race, and technical institute; cumulative output by level and sex, level and race, and sector, trade cluster, and sex; and output by level and race and output of courses. In section III, on apprenticeship, data illustrate the following: apprenticeship (1982-91); intake of apprentices by sector and trade cluster, level and race, and qualification; and apprentices completed training in 1991 by sector and trade cluster Section IV, on continuing education and training, shows training places taken up under Continuing Skills Training and Education (1987-1991). Section V, on worker education, provides data on: training places taken up by Basic Education for Skills Training (BEST) and Worker Improvement through Secondary Education (WISE) participants and BEST and WISE examination results. Statistics on training places taken up by BEST and WISE participants by type of center are also given. Section VI, on trade testing and certification, includes data on candidature by type of test and course level. Section VII provides lists of ongoing full-time courses, ongoing apprenticeship courses, and discontinued full-time courses, as well as data on costs and expenditures. (YLB)

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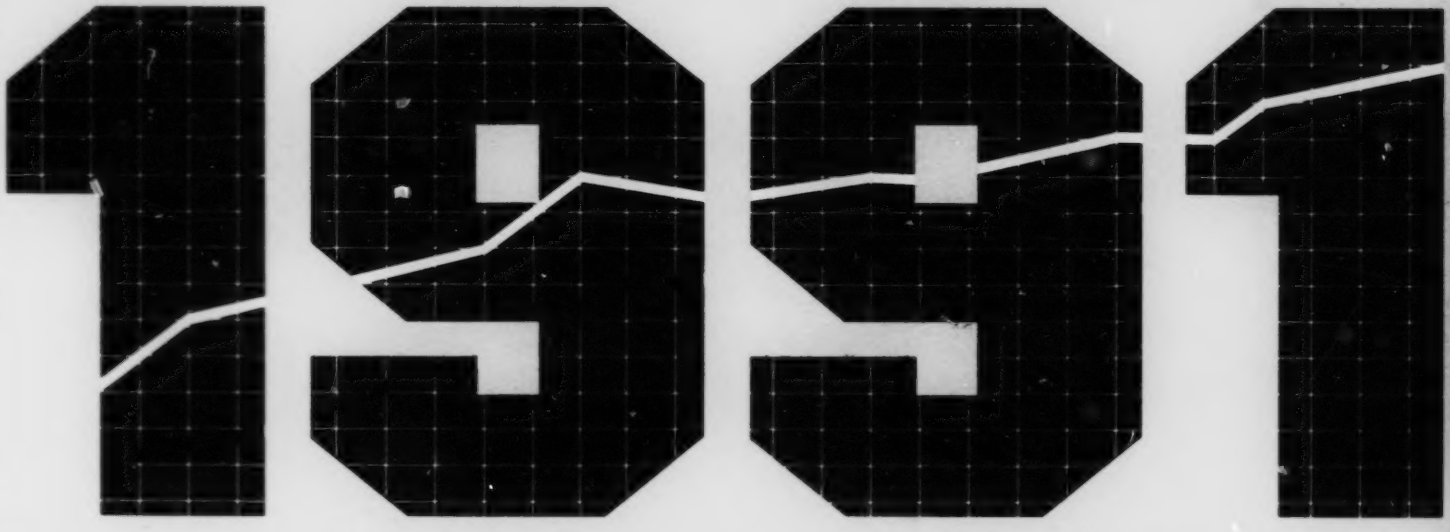
# KEY STATISTICS ON TECHNICAL EDUCATION & TRAINING




## Institute of Technical Education, Singapore (inaugurated on 1 Apr 92)

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# KEY STATISTICS ON TECHNICAL EDUCATION & TRAINING 1991

Institute of Technical Education, Singapore
(Inaugurated on 1 Apr 92)

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# PREFACE

**KEY STATISTICS ON TECHNICAL EDUCATION & TRAINING** documents important statistical data on the technical education & training activities under the purview of the Institute of Technical Education, Singapore (ITE). The ITE was established on 1 Apr 92 to take over the functions of the former Vocational & Industrial Training Board.

**KEY STATISTICS ON TECHNICAL EDUCATION & TRAINING** is an annual publication of ITE. It was previously known as the "Key statistics on Vocational Training". Data for 1986 and subsequent years have been compiled on a Calendar Year basis while Data for years prior to 1986 are on a Financial Year basis.

For clarification of any data in this publication, please contact the Corporate Planning Department, Institute of Technical Education, Singapore on telephone number 7720864.

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## ABBREVIATIONS USED

| Abbreviation | Explanation |
|---|---|
| BEST | Basic Education for Skills Training |
| BM4 | BEST Module 4 |
| BST | Basic Skills Training |
| BVT | Basic Vocational Training |
| CBS | Certificate in Business Studies |
| CoC | Certificate of Competency |
| COS | Certificate in Office Skills |
| CoVT | Certificate of Vocational Training |
| CVE | Certificate in Vocational Education |
| Diploma | Diploma in Applied Arts |
| ITC | Industrial Technician Certificate |
| MOST | Modular Skills Training |
| NTC-1 | National Technical Certificate Grade 1 |
| NTC-2 | National Technical Certificate Grade 2 |
| NTC-3 | National Technical Certificate Grade 3 |
| PCBS | Preliminary Certificate in Business Studies |
| PCVA | Professional Certificate in Vocational Administration |

## ABBREVIATIONS USED (Cont'd)

| | | |
|---|---|---|
| PTT | | Public Trade Test |
| PVT | | Pre-Vocational Training |
| WISE | | Worker Improvement through Secondary Education |
| ITE/AMK | [AMKVI] | ITE Ang Mo Kio |
| ITE/BK | [BKVI] | ITE Bedok |
| ITE/BM (C1) | [BMVI] | ITE Bukit Merah (Campus 1) |
| ITE/BM (C2) | [BVI] | ITE Bukit Merah (Campus 2) |
| ITE/BR (C1) | [SVI] | ITE Balestier (Campus 1) |
| ITE/BR (C2) | [MNVI] | ITE Balestier (Campus 2) |
| ITE/BR (C3) | [KKVI] | ITE Balestier (Campus 3) |
| ITE/BS | [NIC] | ITE Bishan |
| ITE/CT | [CIC] | ITE Clementi |
| ITE/GS | [GSVI] | ITE Geylang Serai |
| ITE/JR | [JVI] | ITE Jurong |
| ITE/MP | [STI] | ITE MacPherson |
| ITE/PP | [PPVI] | ITE Pasir Panjang |
| BTVI | | Boys' Town Vocational Institute |

* *Institute names in parenthesis [ ] were the former names of the respective institutes*

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## NOMENCLATURE

| Term | Definition |
|---|---|
| Intake | Intake refers to the total number of trainees admitted to a course at a specific intake exercise. |
| Average Enrolment | Enrolment refers to the total number of trainees at a particular point in time when the count is taken. Average Enrolment refers to the mean of enrolment for a given period. |
| Output | Output refers to the number of trainees who have completed training. |
| Pass Rate | Pass Rate refers to the number of candidates who passed as against the number of candidates. |

$$\text{ie Pass Rate} = \frac{\text{Number of candidates who passed the examination}}{\text{Number of candidates who took the examination}} \times 100\%$$

SECTION I

# TECHNICAL EDUCATION & TRAINING IN SINGAPORE

## MAJOR DEVELOPMENT IN 1991

### 1 UPGRADING VOCATIONAL TRAINING

The VITB released its report on Upgrading Vocational Training in March 1991. The key recommendations made are : course restructuring, more apprenticeship training options, more progression opportunities for VITB graduates, upgrading of the training environment and renaming VITB vocational institutes.

### 2 MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN VITB AND MINISTRY OF EDUCATION AND SPORTS, BADEN WÜRTTEMBERG, GERMANY

A MOU to establish a five-year co-operation in the field of vocational training was signed in June 1991. The VITB and the Ministry of Education and Sports, Baden Württemberg, Germany affirmed through this memorandum their mutual wish to promote, cooperate and develop links in the field of Vocational Training.

### 3 PEDAGOGIC COURSES FOR INDUSTRY TRAINER

The pedagogic courses for industry trainers were launched in January 1991, in conjunction with the New Apprenticeship System. These courses are being conducted to enhance the pedagogic competence of industry trainers to ensure quality and creditable training.

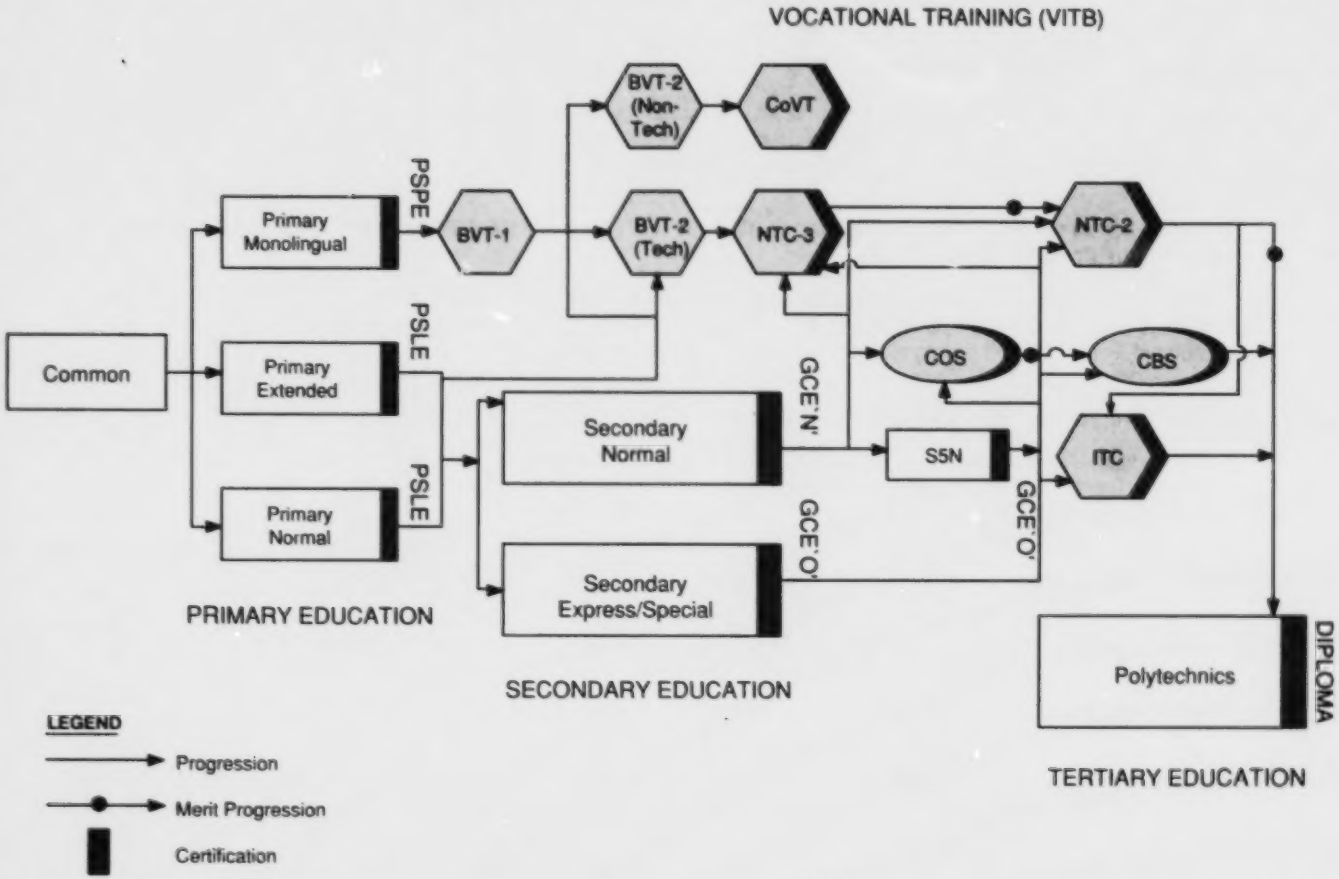
### 4 TIME PROGRAMME

A Training Initiative for Mature Employees (TIME) programme developed jointly with the NTUC was launched in November 1991. It caters to workers aged 40 or older who do not have primary education and wish to upgrade their skills.

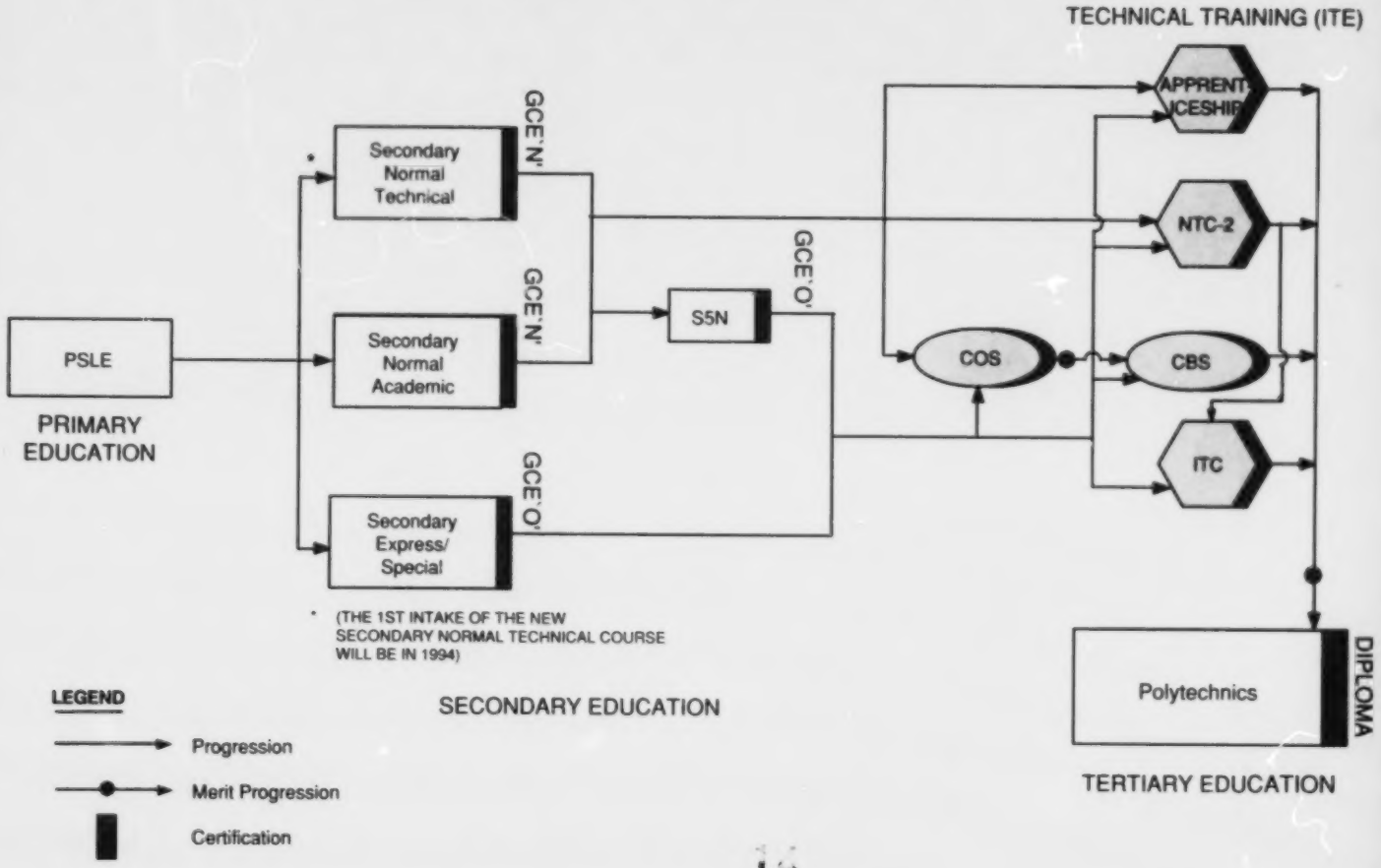
### 5 PUBLIC EXAMINATIONS FOR WISE AND BEST

The 1st series of public examinations for WISE and BEST candidates were held in Aug and Dec 91 respectively. Workers can now sit for the public examinations in BEST module 4 and WISE module 1, 2 and 3 in English Language and Mathematics without having to attend classes. Prior to this scheme, workers must enrol for the course in order to sit for the examinations.

## FORMER VOCATIONAL TRAINING SYSTEM



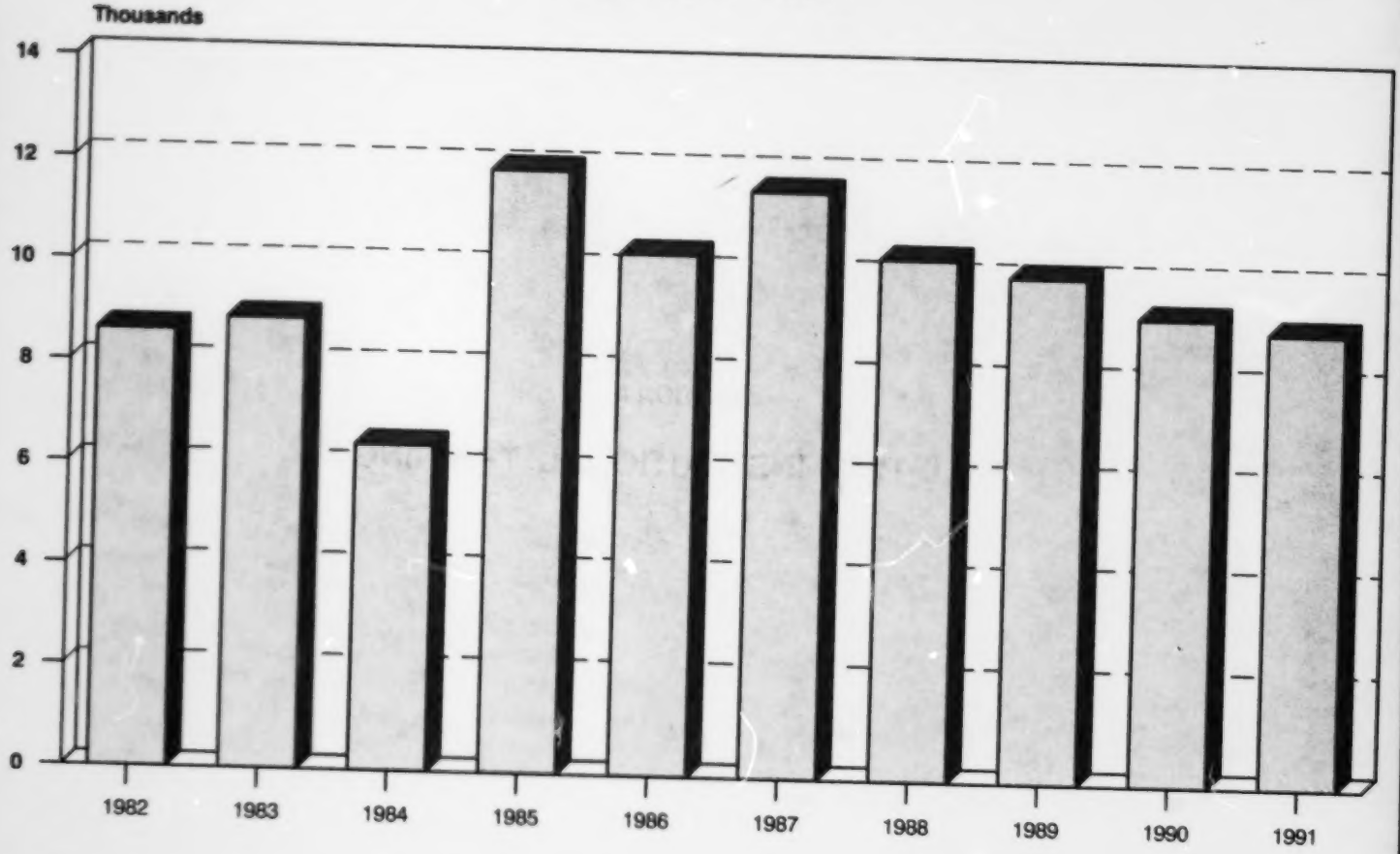
# NEW TECHNICAL TRAINING SYSTEM



SECTION II

# FULL-TIME INSTITUTIONAL TRAINING

## INTAKE (1982 — 1991)

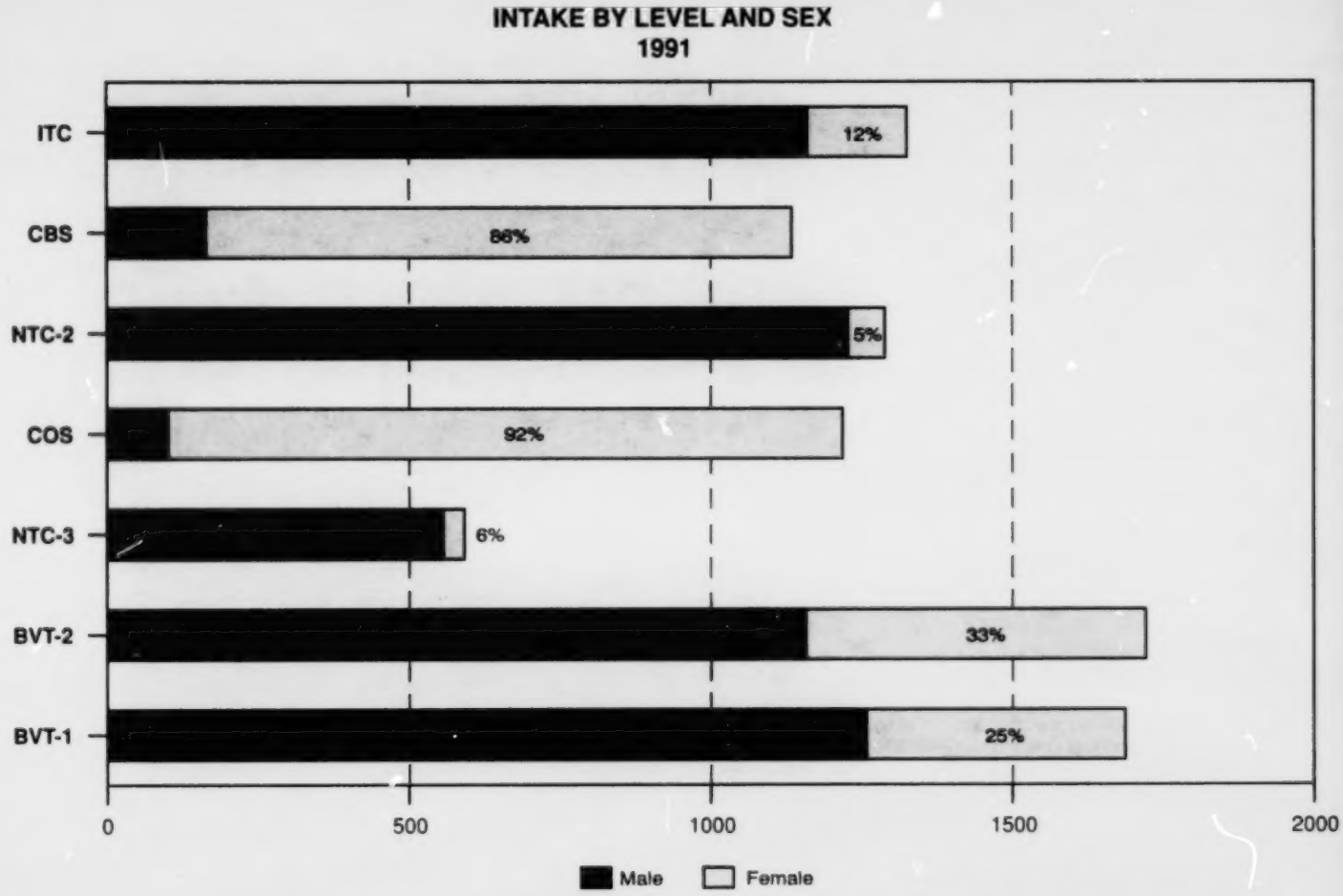


## INTAKE BY LEVEL ( 1982 — 1991 )

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **8,623** | **8,881** | **6,426** | **11,891** | **10,291** | **11,573** | **10,294** | **9,982** | **9,221** | **8,969** |
| **By Course Level** | | | | | | | | | | |
| Diploma # | 61 | 67 | 65 | 95 | 88 | 82 | 108 | 106 | — | — |
| ITC | 890 | 799 | 656 | 885 | 905 | 1,168 | 1,336 | 1,343 | 1,410 | 1,326 |
| CBS | 407 | 462 | 596 | 531 | 869 | 902 | 1,040 | 1,098 | 1,077 | 1,135 |
| NTC-2 | 661 | 545 | 762 | 1,076 | 752 | 1,241 | 1,346 | 1,301 | 1,370 | 1,289 |
| PCBS/COS * | 336 | 901 | 914 | 851 | 1,464 | 1,775 | 1,529 | 1,418 | 1,367 | 1,219 |
| NTC-3 | 2,650 | 2,142 | 1,363 | 2,732 | 1,216 | 842 | 646 | 828 | 613 | 592 |
| BST/BVT-2 * | 2,242 | 2,274 | 1,625 | 3,290 | 2,182 | 2,305 | 1,845 | 1,951 | 1,850 | 1,721 |
| PVT/BVT-1 * | — | — | 142 | 2,406 | 2,768 | 3,247 | 2,428 | 1,937 | 1,534 | 1,687 |
| CoC | 1,355 | 1,428 | 224 | 12 | 44 | — | — | — | — | — |
| Others | 21 | 263 | 79 | 13 | 3 | 11 | 16 | — | — | — |

*# The Diploma courses were transferred to Temasek Polytechnic with effect from July 1990.*

** The PCBS course was renamed COS with effect from July 1989.*
*The BST course was renamed BVT-2 with effect from January 1989.*
*The PVT course was renamed BVT-1 with effect from January 1989.*


INTAKE BY LEVEL AND SEX
1991
ITC
CBS
NTC-2
COS
NTC-3
BVT-2
BVT-1
12%
86%
5%
92%
6%
33%
25%
0
500
1000
1500
2000
Male
Female

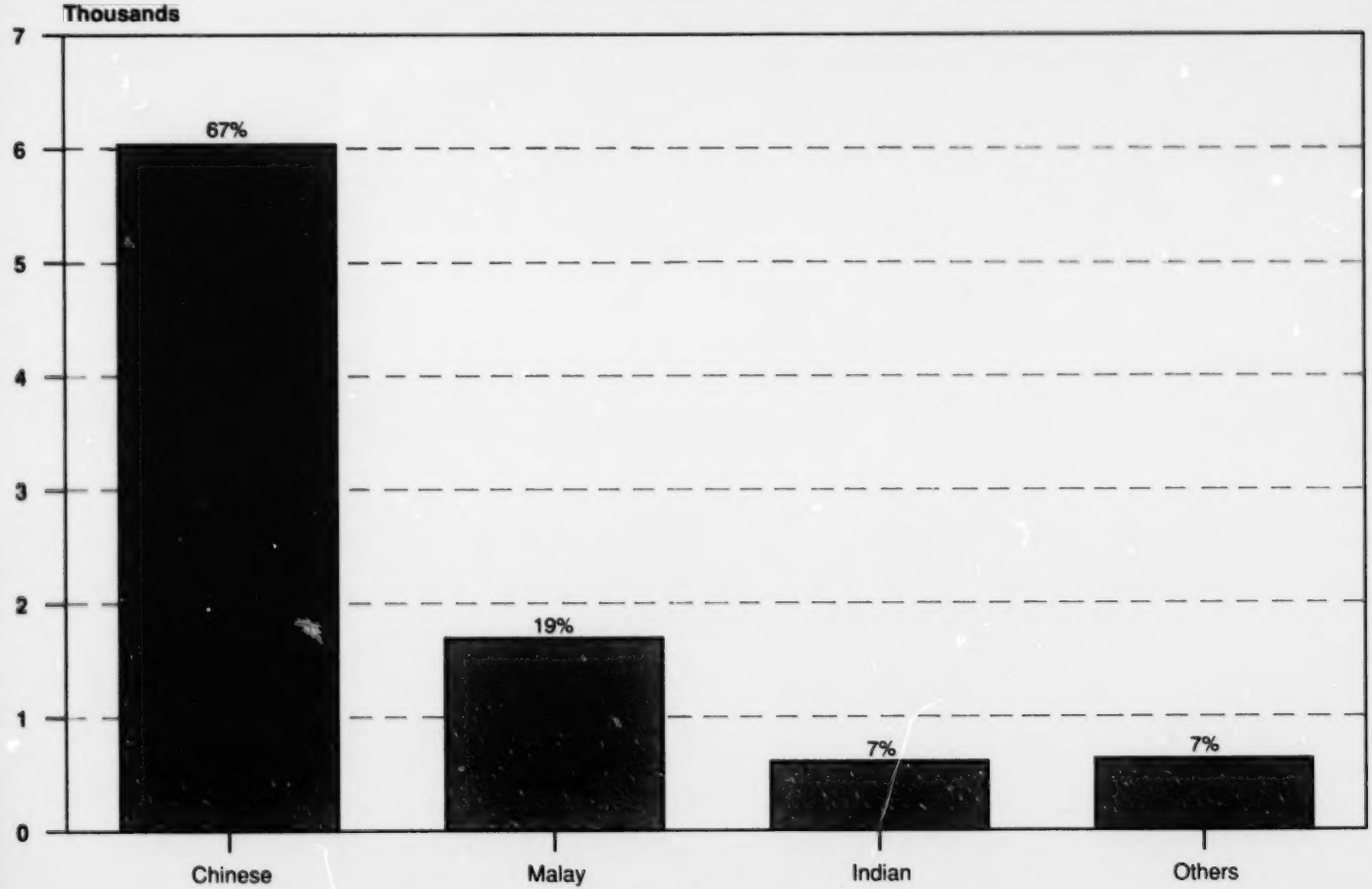


16

## INTAKE BY LEVEL AND SEX

| Intake | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **8,969** | **5,627** | **3,342** |
| **By Course Level** | | | |
| ITC | 1,326 | 1,161 | 165 |
| CBS | 1,135 | 164 | 971 |
| NTC-2 | 1,289 | 1,228 | 61 |
| COS | 1,219 | 101 | 1,118 |
| NTC-3 | 592 | 557 | 35 |
| BVT-2 | 1,721 | 1,158 | 563 |
| BVT-1 | 1,687 | 1,258 | 429 |

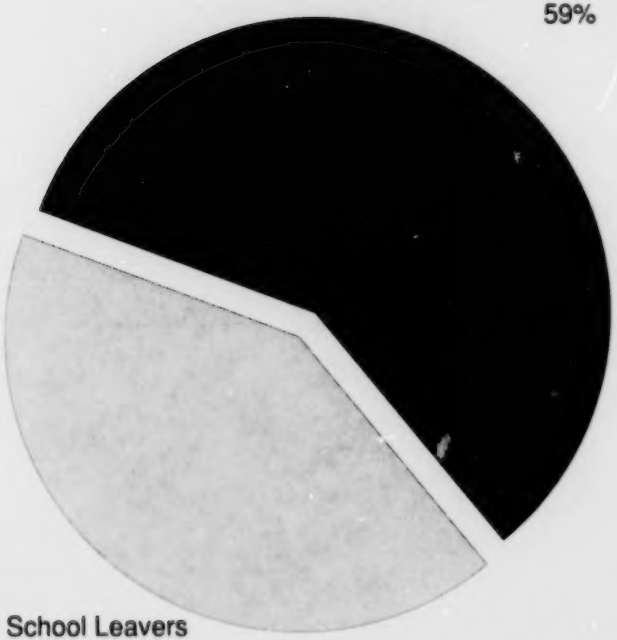
## INTAKE BY RACE
## 1991



## INTAKE BY LEVEL AND RACE

| Intake | 1991 | | | | |
|---|---|---|---|---|---|
| | Total | Chinese | Malay | Indian | Others |
| **Total** | **8,969** | **6,039** | **1,694** | **607** | **629** |
| **By Course Level** | | | | | |
| ITC | 1,326 | 1,073 | 133 | 49 | 71 |
| CBS | 1,135 | 927 | 114 | 44 | 50 |
| NTC-2 | 1,289 | 734 | 350 | 91 | 114 |
| COS | 1,219 | 868 | 216 | 66 | 69 |
| NTC-3 | 592 | 298 | 219 | 51 | 24 |
| BVT-2 | 1,721 | 1,022 | 396 | 149 | 154 |
| BVT-1 | 1,687 | 1,117 | 266 | 157 | 147 |

**INTAKE BY QUALIFICATION**
**1991**

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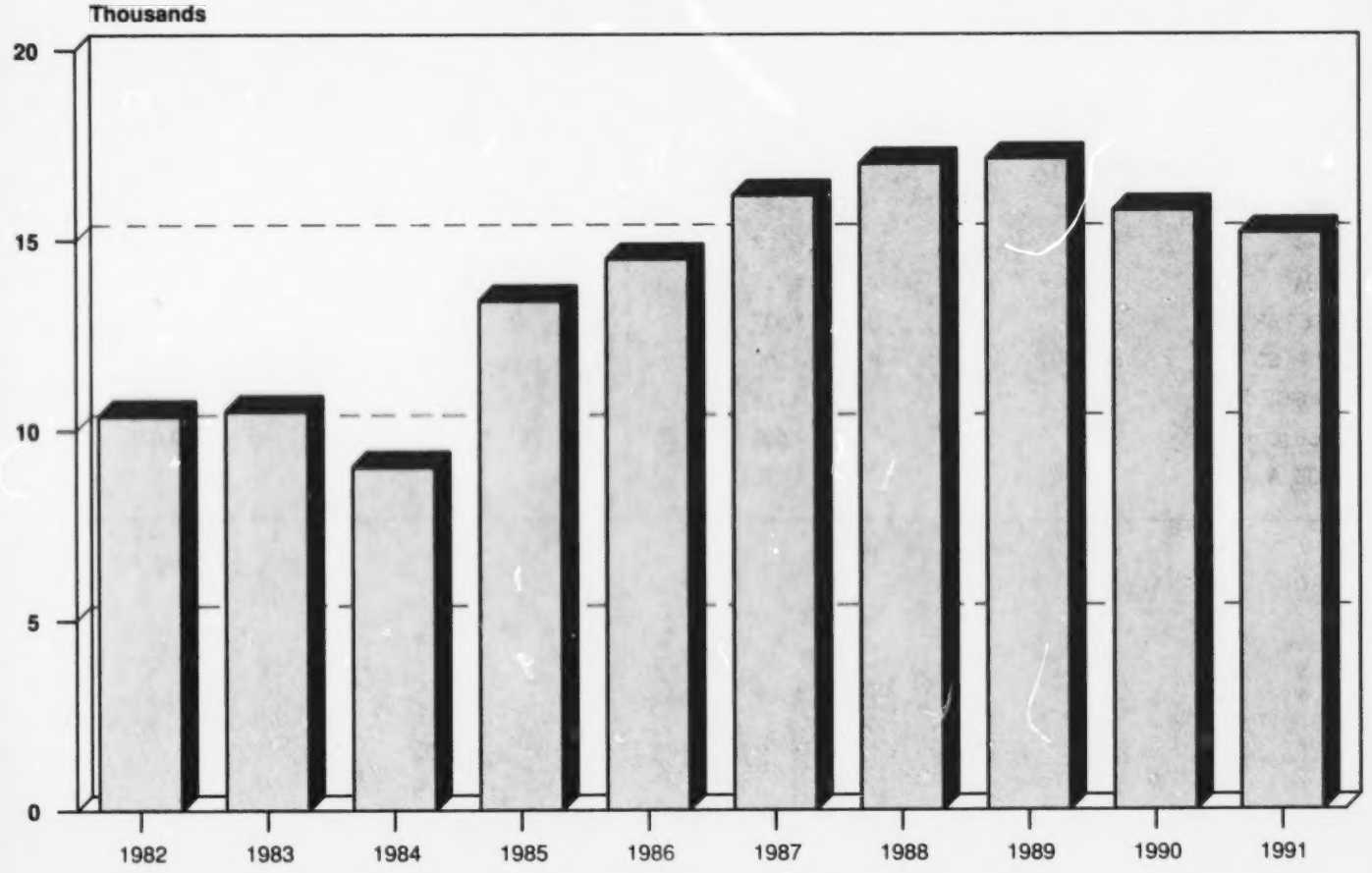
## INTAKE BY QUALIFICATION

| Intake | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **8,969** | **5,627** | **3,342** |
| **By Educational Qualification** | | | |
| Below Primary 6 | 36 | 36 | — |
| BM4 | 3 | 3 | — |
| P8M | 1,753 | 1,318 | 435 |
| P8E/P6N | 1,537 | 994 | 543 |
| S1 — S3 | 390 | 361 | 29 |
| S4/GCE 'N' | 716 | 453 | 263 |
| GCE 'O' | 4,528 | 2,457 | 2,071 |
| GCE 'A' | 6 | 5 | 1 |

## AVERAGE ENROLMENT (1982 — 1991)



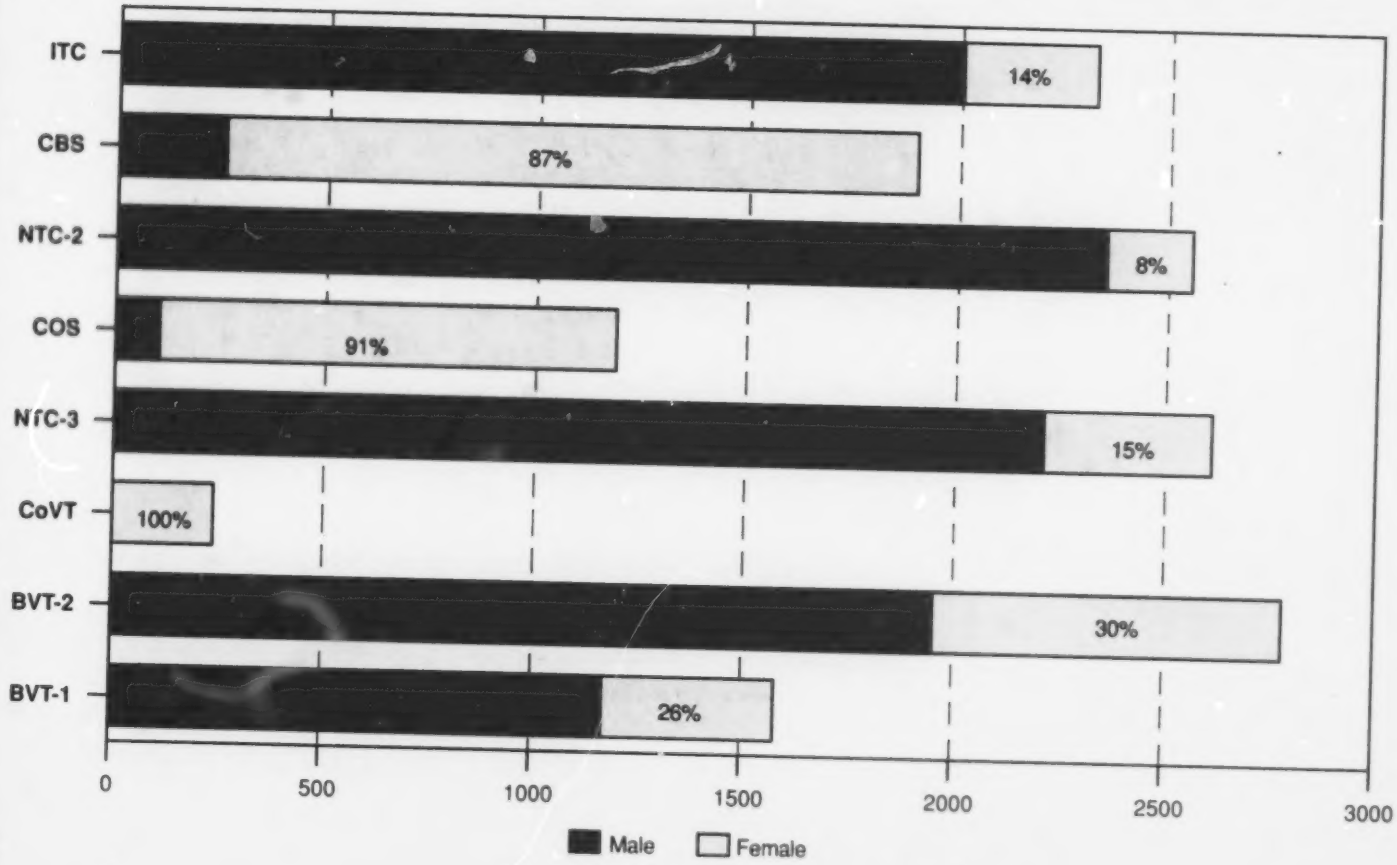
## AVERAGE ENROLMENT BY LEVEL (1982 — 1991)

| Average Enrolment | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **10,381** | **10,508** | **9,036** | **13,404** | **14,496** | **16,166** | **16,999** | **17,133** | **15,769** | **15,181** |
| **By Course Level** | | | | | | | | | | |
| Diploma # | 120 | 152 | 167 | 191 | 211 | 238 | 255 | 275 | — | — |
| ITC | 1,650 | 1,573 | 1,366 | 1,244 | 1,396 | 1,664 | 2,029 | 2,256 | 2,319 | 2,323 |
| CBS | 692 | 909 | 853 | 860 | 1,080 | 1,380 | 1,579 | 1,698 | 1,811 | 1,899 |
| NTC-2 | 562 | 632 | 901 | 1,243 | 1,629 | 1,711 | 2,131 | 2,434 | 2,463 | 2,556 |
| PCBS/COS * | 313 | 597 | 840 | 876 | 1,289 | 1,448 | 1,472 | 1,394 | 1,296 | 1,191 |
| NTC-3 | 4,515 | 4,042 | 3,175 | 3,849 | 3,396 | 3,004 | 3,511 | 3,679 | 2,955 | 2,610 |
| CoVT | — | — | — | — | — | — | — | — | 422 | 240 |
| BST/BVT-2 * | 2,082 | 2,158 | 1,497 | 2,958 | 2,889 | 3,723 | 3,722 | 3,603 | 3,059 | 2,782 |
| PVT/BVT-1 * | — | — | 136 | 2,160 | 2,581 | 2,983 | 2,277 | 1,794 | 1,444 | 1,580 |
| CoC | 342 | 357 | 56 | 3 | 11 | — | — | — | — | — |
| Other Commercial Courses | 71 | — | — | — | — | — | — | — | — | — |
| Others | 34 | 88 | 45 | 20 | 14 | 15 | 23 | — | — | — |

*# The Diploma courses were transferred to the Temasek Polytechnic with effect from July 1990.*

** The PCBS course was renamed COS with effect from July 1989.*
*The BST course was renamed BVT-2 with effect from January 1989.*
*The PVT course was renamed BVT-1 with effect from January 1389.*

## AVERAGE ENROLMENT BY LEVEL AND SEX
## 1991

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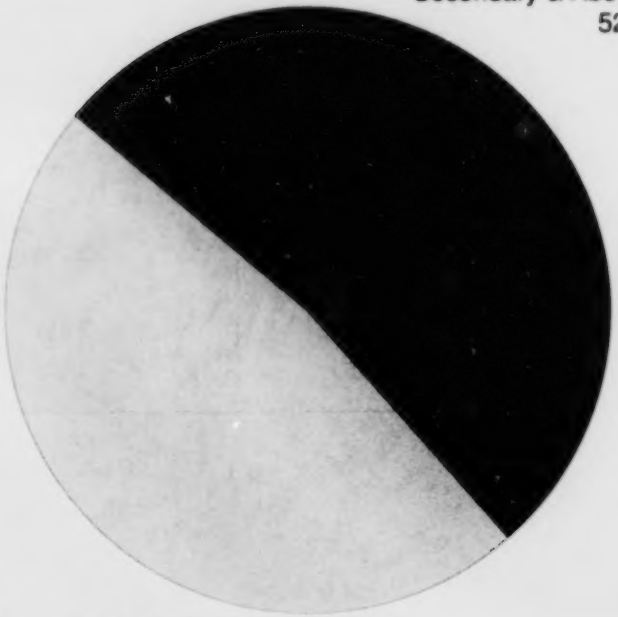
## AVERAGE ENROLMENT BY LEVEL AND SEX

| Average Enrolment | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **15,181** | **10,048** | **5,133** |
| **By Course Level** | | | |
| ITC | 2,323 | 2,003 | 320 |
| CBS | 1,899 | 255 | 1,644 |
| NTC-2 | 2,556 | 2,352 | 204 |
| COS | 1,191 | 104 | 1,087 |
| NTC-3 | 2,610 | 2,210 | 400 |
| CoVT | 240 | — | 240 |
| BVT-2 | 2,782 | 1,953 | 829 |
| BVT-1 | 1,580 | 1,171 | 409 |

**AVERAGE ENROLMENT BY QUALIFICATION**
**1991**



## AVERAGE ENROLMENT BY QUALIFICATION

| Average Enrolment | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **15,181** | **10,048** | **5,133** |
| **By Educational Qualification** | | | |
| Below Primary 6 | 42 | 42 | 0 |
| BM4 | 4 | 4 | 0 |
| P8M | 4,170 | 3,165 | 1,005 |
| P8E/P6N | 2,425 | 1,578 | 847 |
| S1 — S3 | 581 | 542 | 39 |
| S4/GCE 'N' | 804 | 550 | 254 |
| GCE 'O' | 7,143 | 4,158 | 2,985 |
| GCE 'A' | 12 | 9 | 3 |

## AVERAGE ENROLMENT BY LEVEL AND RACE

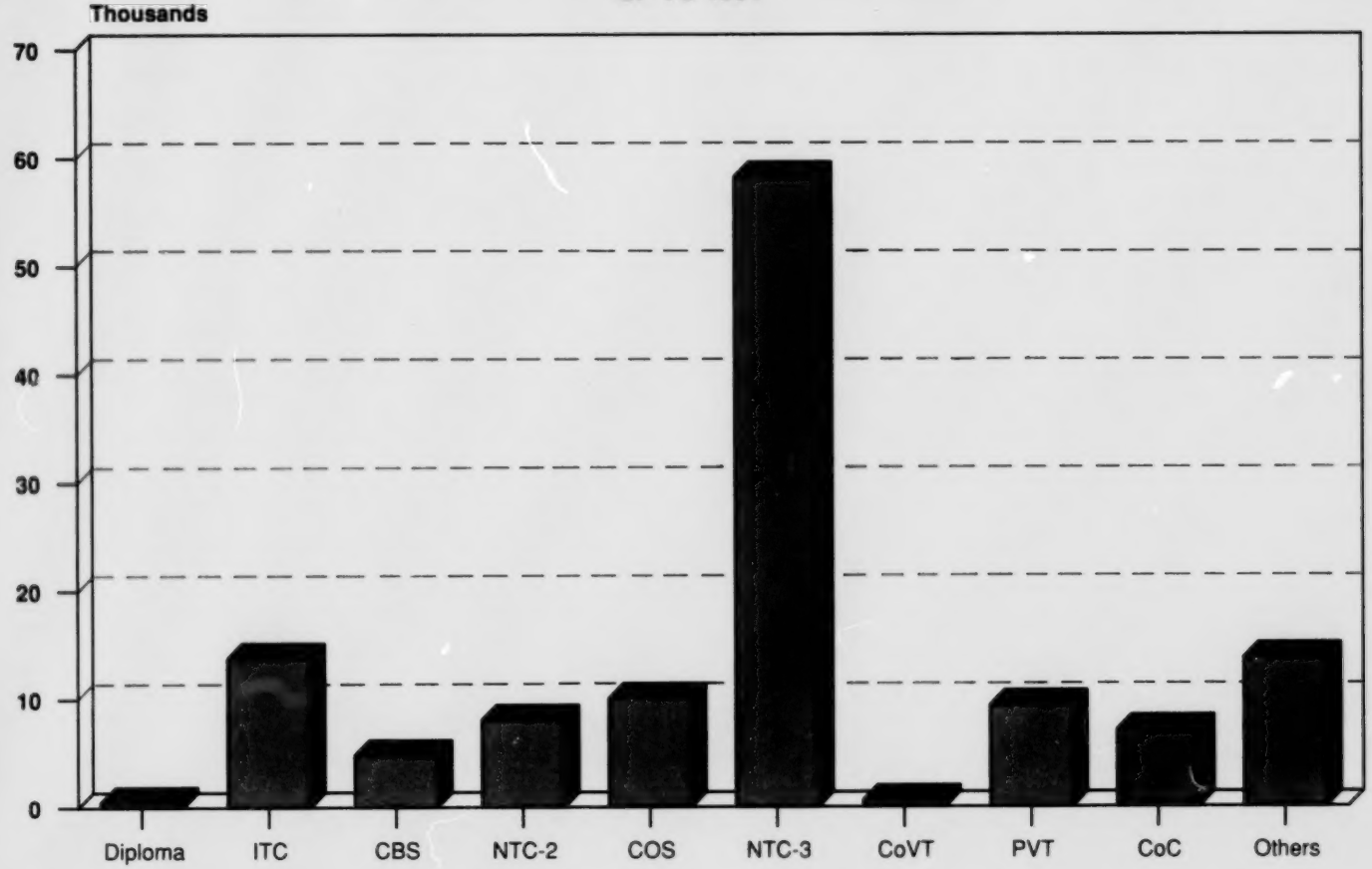
| Average Enrolment | 1991 | | | | |
|---|---|---|---|---|---|
| | Total | Chinese | Malay | Indian | Others |
| **Total** | **15,181** | **10,539** | **2,879** | **946** | **817** |
| **By Course Level** | | | | | |
| ITC | 2,323 | 1,928 | 234 | 75 | 86 |
| CBS | 1,899 | 1,579 | 181 | 69 | 70 |
| NTC-2 | 2,556 | 1,575 | 693 | 147 | 141 |
| COS | 1,191 | 867 | 216 | 52 | 56 |
| NTC-3 | 2,610 | 1,577 | 659 | 226 | 148 |
| CoVT | 240 | 168 | 46 | 16 | 10 |
| BVT-2 | 2,782 | 1,797 | 576 | 219 | 190 |
| BVT-1 | 1,580 | 1,048 | 274 | 142 | 116 |

## AVERAGE ENROLMENT BY TECHNICAL INSTITUTE

| Average Enrolment | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **15,181** | **10,048** | **5,133** |
| **By Technical Institute** | | | |
| ITE/AMK [AMKVI] | 1,778 | 1,304 | 474 |
| ITE/BK [BKVI] | 1,745 | 1,280 | 465 |
| ITE/BM (C1) [BMVI] | 855 | 841 | 14 |
| ITE/BM (C2) [BVI] | 192 | 153 | 39 |
| ITE/BR (C1) [SVI] | 1,117 | 831 | 286 |
| ITE/BR (C2) [MNVI] | 202 | 159 | 43 |
| ITE/BR (C3) [KKVI] | 178 | 137 | 41 |
| ITE/BS [NIC] | 1,573 | 150 | 1,423 |
| ITE/CT [CIC] | 1,517 | 209 | 1,308 |
| ITE/GS [GSVI] | 421 | 386 | 35 |
| ITE/JR [JVI] | 1,409 | 1,161 | 248 |
| ITE/MP [STI] | 2,323 | 2,003 | 320 |
| ITE/PP [PPVI] | 1,394 | 957 | 437 |
| BTVI | 477 | 477 | 0 |

* *Institute names in parenthesis [ ] were the former names of the respective institutes*

## CUMULATIVE OUTPUT BY LEVEL AND SEX
## UP TO 1991



## CUMULATIVE OUTPUT BY LEVEL AND SEX

| Output | Cumulative Output up to 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **126,249** | **86,985** | **39,264** |
| **By Course Level** | | | |
| Diploma | 493 | 175 | 318 |
| ITC | 13,775 | 11,918 | 1,857 |
| CBS | 4,814 | 783 | 4,031 |
| NTC-2 | 8,057 | 7,187 | 870 |
| COS | 10,051 | 1,016 | 9,035 |
| NTC-3 | 58,231 | 50,751 | 7,480 |
| CoVT | 611 | — | 611 |
| PVT | 9,382 | 7,295 | 2,087 |
| CoC | 7,078 | 6,761 | 317 |
| Other Commercial Courses | 13,757 | 1,099 | 12,658 |

## CUMULATIVE OUTPUT BY SECTOR, TRADE CLUSTER AND SEX

| SECTOR/TRADE CLUSTER | Output in 1991 | | | Cumulative Output Up to 1991 | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| **MANUFACTURING** | | | | | | |
| Precision Engineering | 1,105 | 902 | 203 | 15,739 | 13,409 | 2,330 |
| Electrical | 480 | 451 | 29 | 12,380 | 11,857 | 523 |
| Electronics | 928 | 803 | 125 | 11,897 | 10,455 | 1,442 |
| Automation | 173 | 166 | 7 | 583 | 566 | 17 |
| Printing | 172 | 143 | 29 | 1,876 | 1,453 | 423 |
| Woodbased | 61 | 54 | 7 | 4,957 | 4,193 | 764 |
| **Subtotal** | **2,919** | **2,519** | **400** | **47,432** | **41,933** | **5,499** |
| **TECHNICAL SUPPORT** | | | | | | |
| Mechanical & Maintenance | 668 | 604 | 64 | 11,537 | 10,541 | 996 |
| Automotive | 601 | 599 | 2 | 8,468 | 8,420 | 48 |
| Drafting & Building Servicing | 246 | 196 | 50 | 5,117 | 4,022 | 1,095 |
| Marine & Fabrication | 151 | 146 | 5 | 9,387 | 9,164 | 223 |
| **Subtotal** | **1,666** | **1,545** | **121** | **34,509** | **32,147** | **2,362** |
| **FINANCE & BUSINESS** | | | | | | |
| Business Studies | 2,015 | 221 | 1,794 | 28,622 | 2,898 | 25,724 |
| **Subtotal** | **2,015** | **221** | **1,794** | **28,622** | **2,898** | **25,724** |
| **SERVICE** | | | | | | |
| Retail Sales | 174 | 0 | 174 | 389 | 0 | 389 |
| Hotel/Catering | 8 | 0 | 8 | 580 | 254 | 326 |
| Garments/Textiles | 124 | 5 | 119 | 1,856 | 381 | 1,475 |
| Hairstyling | 62 | 4 | 58 | 962 | 96 | 866 |
| **Subtotal** | **368** | **9** | **359** | **3,787** | **731** | **3,056** |
| **OTHERS *** | — | — | — | **11,899** | **9,276** | **2,623** |
| **TOTAL** | **6,968** | **4,294** | **2,674** | **126,249** | **86,985** | **39,264** |

* *Include the Diploma in Applied Arts courses which were formerly conducted by VITB before they were transferred to the Temasek Polytechnic, and other discontinued courses that are not classified in the trade clusters above*

** *Refer to page 78 for the list of full-time courses by sector and trade cluster*

## OUTPUT BY LEVEL AND RACE

| Output | 1991 | | | | |
|---|---|---|---|---|---|
| | Total | Chinese | Malay | Indian | Others |
| **Total** | **6,968** | **4,962** | **1,372** | **364** | **270** |
| **By Course Level** | | | | | |
| ITC | 1,000 | 843 | 94 | 32 | 31 |
| CBS | 831 | 709 | 78 | 22 | 22 |
| NTC-2 | 1,350 | 903 | 363 | 52 | 32 |
| COS | 1,184 | 880 | 217 | 40 | 47 |
| NTC-3 | 2,386 | 1,468 | 583 | 205 | 130 |
| CoVT | 217 | 159 | 37 | 13 | 8 |

## OUTPUT OF COURSES

| | Output in 1991 | | | Cumulative Output up to 1991 | | |
|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| **On-Going Courses as at 1991** | | | | | | |
| **ITC** | | | | | | |
| Electrical Engineering | 221 | 193 | 28 | 4,108 | 3,801 | 307 |
| Electro-Mechanical Engineering | 82 | 76 | 6 | 128 | 117 | 11 |
| Electronics Engineering | 374 | 303 | 71 | 4,237 | 3,596 | 641 |
| Mechanical & Electrical Drafting & Design | 116 | 88 | 28 | 1,491 | 1,022 | 469 |
| Mechanical Engineering | 207 | 195 | 12 | 2,090 | 1,984 | 106 |
| **Subtotal** | **1,000** | **855** | **145** | **12,054** | **10,520** | **1,534** |
| **CBS** | | | | | | |
| Certificate in Business Studies — Accounting | 555 | 111 | 444 | 3,321 | 763 | 2,558 |
| Certificate in Business Studies — Secretarial Practice | 276 | 3 | 273 | 1,493 | 20 | 1,473 |
| **Subtotal** | **831** | **114** | **717** | **4,814** | **783** | **4,031** |
| **NTC-2** | | | | | | |
| Air-Conditioning & Refrigeration [Air-Conditioning & Refrigeration Mechanics] | 33 | 33 | 0 | 441 | 433 | 8 |
| Architectural Drafting | 54 | 40 | 14 | 427 | 268 | 159 |

## OUTPUT OF COURSES

| | Output in 1991 | | | Cumulative Output up to 1991 | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| Civil/Structural Drafting | 18 | 13 | 5 | 234 | 153 | 81 |
| Fashion Garment [Dressmaking] | 53 | 5 | 48 | 285 | 24 | 261 |
| Electrical Installation & Servicing [Electrical Fitting & Installation] | 139 | 139 | 0 | 833 | 829 | 4 |
| Electrical Power & Machines | 48 | 47 | 1 | 223 | 217 | 6 |
| Electronics Servicing(Digital Equipment) | 263 | 247 | 16 | 933 | 859 | 74 |
| Electronics Servicing (Electronics Instrumentation) | 49 | 45 | 4 | 228 | 213 | 15 |
| Electronics Servicing(Video Technology) [Electronics Servicing(Video Equipment)] | 55 | 54 | 1 | 559 | 523 | 36 |
| Electro-Mechanical Servicing | 91 | 90 | 1 | 448 | 443 | 5 |
| Hairstyling [Hairdressing] | 6 | 3 | 3 | 47 | 20 | 27 |
| Diesel Engine Mechanics [Heavy Duty Diesel Mechanics] | 22 | 22 | 0 | 160 | 159 | 1 |
| Mechanical Servicing [Maintenance Fitting] | 75 | 69 | 6 | 275 | 265 | 10 |
| Motor Vehicle Mechanics | 86 | 86 | 0 | 793 | 788 | 5 |
| Precision Machining | 172 | 153 | 19 | 1,052 | 954 | 98 |

## OUTPUT OF COURSES

| | Output in 1991 | | | Cumulative Output up to 1991 | | |
|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| Precision Tooling(Injection Mould) [Tool & Die Making(Injection Mould)] | 72 | 69 | 3 | 313 | 302 | 11 |
| Precision Tooling(Press Tool) [Tool & Die Making(Press Tool)] | 47 | 41 | 6 | 273 | 260 | 13 |
| **Day Release Courses *** | | | | | | |
| Graphic Reproduction | 30 | 21 | 9 | 83 | 47 | 36 |
| Offset Printing | 37 | 37 | 0 | 107 | 106 | 1 |
| **Subtotal** | **1,350** | **1,214** | **136** | **7,714** | **6,863** | **851** |
| **COS** | 1,184 | 107 | 1,077 | 10,051 | 1,016 | 9,035 |
| **Subtotal** | **1,184** | **107** | **1,077** | **10,051** | **1,016** | **9,035** |
| **NTC-3** | | | | | | |
| Air-Conditioning & Refrigeration [Air-Conditioning & Refrigeration Mechanics] | 120 | 111 | 9 | 1,209 | 1,165 | 44 |
| Building Drafting | 19 | 17 | 2 | 1,243 | 916 | 327 |
| Building Servicing | 39 | 38 | 1 | 470 | 438 | 32 |
| Fashion Garment [Dressmaking] | 59 | 0 | 59 | 923 | 7 | 916 |

## OUTPUT OF COURSES

| | Output in 1991 | | | Cumulative Output up to 1991 | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| Electrical Installation & Servicing [Electrical Fitting & Installation] | 72 | 72 | 0 | 6,382 | 6,182 | 200 |
| Electronics Servicing | 164 | 154 | 10 | 5,777 | 5,233 | 544 |
| Furniture Production | 48 | 48 | 0 | 910 | 574 | 336 |
| General Welding | 41 | 38 | 3 | 4,257 | 4,172 | 85 |
| Graphic Reproduction | 8 | 8 | 0 | 277 | 194 | 83 |
| Hairstyling [Hairdressing] | 56 | 1 | 55 | 915 | 76 | 839 |
| Diesel Engine Mechanics [Heavy Duty Diesel Mechanics] | 158 | 158 | 0 | 2,509 | 2,507 | 2 |
| Mechanical Servicing [Maintenance Fitting] | 440 | 391 | 49 | 8,585 | 7,771 | 814 |
| Marine Mechanics [Marine Fitting] | 110 | 108 | 2 | 1,117 | 1,106 | 11 |
| Precision Machining [Metal Machining] | 607 | 444 | 163 | 12,011 | 9,909 | 2,102 |
| Motor Vehicle Mechanics | 335 | 333 | 2 | 4,555 | 4,522 | 33 |
| Offset Printing | 23 | 23 | 0 | 456 | 424 | 32 |
| Upholstery | 13 | 6 | 7 | 349 | 113 | 236 |

## OUTPUT OF COURSES

| | Output in 1991 | | | Cumulative Output up to 1991 | | |
|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| **Day Release Courses *** | | | | | | |
| Graphic Reproduction | 36 | 17 | 19 | 132 | 72 | 60 |
| Offset Printing | 38 | 37 | 1 | 186 | 182 | 4 |
| **Subtotal** | **2,386** | **2,004** | **382** | **52,263** | **45,563** | **6,700** |
| **CoVT** | 217 | 0 | 217 | 611 | 0 | 611 |
| **Subtotal** | **217** | **0** | **217** | **611** | **0** | **611** |
| **Other Discontinued Courses **** | — | — | — | 38,742 | 22,240 | 16,502 |
| **Subtotal** | **—** | **—** | **—** | **38,742** | **22,240** | **16,502** |
| **Total** | **6.968** | **4,294** | **2,674** | **126,249** | **86,985** | **39,264** |

* *These courses were launched in 1979. They were part-time day-release courses until 1988 when they were captured under full-time statistics as they were conducted using full-time resources and facilities. Cumulative figures reflected were cumulative output from 1988.*

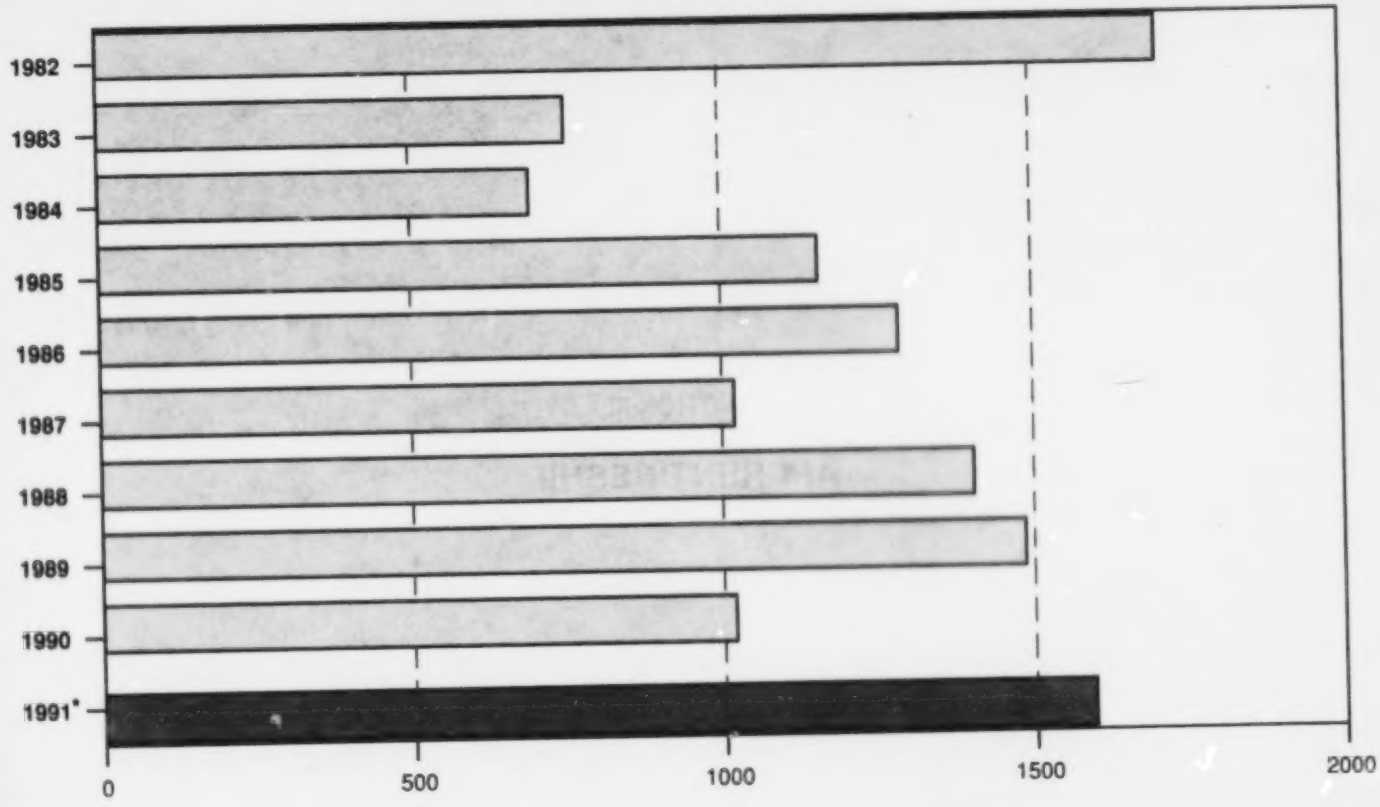
** *Readers who are interested in the discontinued courses can refer to page 82 on the list of courses.*

*** *Course Titles in Parenthesis [ ] state the former course titles of the respective courses.*

SECTION III

# APPRENTICESHIP

## INTAKE OF APPRENTICES (1982 — 1991)




* Intake of Apprentices under the New Apprenticeship System

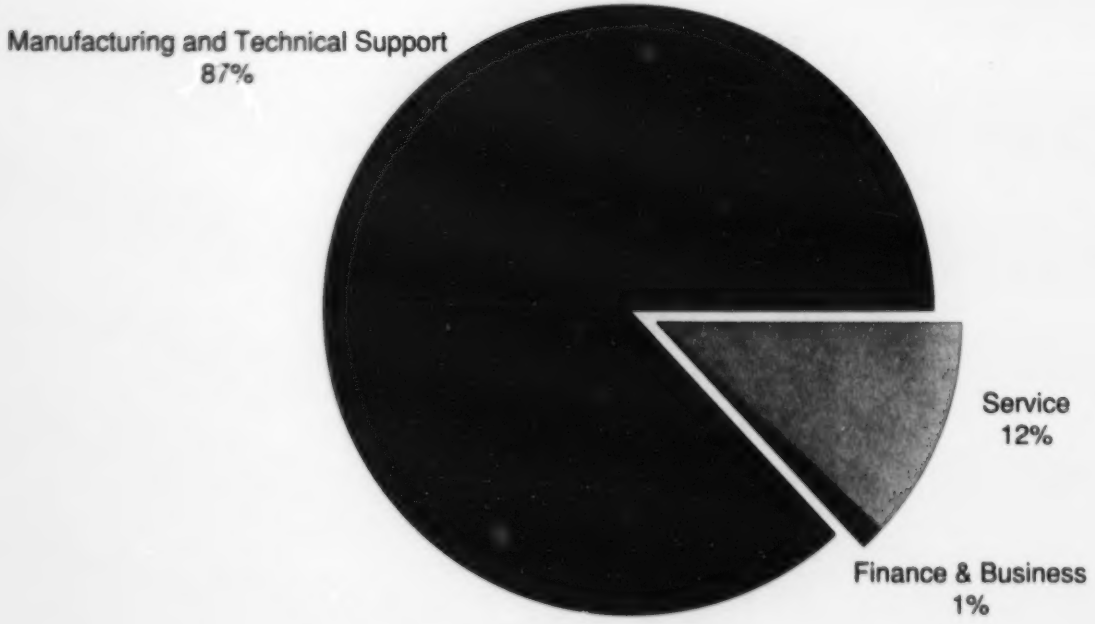
## APPRENTICESHIP ( 1982 — 1991 )

| Apprenticeship | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|---|
| Firms participated in apprenticeship as at year end | 271 | 242 | 173 | 177 | 160 | 192 | 181 | 182 | 209 | 202 |
| Intake of apprentices * | 1,705 | 752 | 694 | 1,157 | 1,285 | 1,020 | 1,404 | 1,486 | 1,019 | 1,594 |
| Apprentices completed training during the year | 914 | 1,428 | 1,386 | 891 | 966 | 1,171 | 1,177 | 1,214 | 1,071 | 1,081 |
| Apprentices in training as at year end | 3,810 | 2,849 | 2,271 | 2,078 | 2,272 | 1,961 | 2,152 | 2,350 | 2,287 | 2,134 |

* *Exclude Apprentices in the EDB Training Centres/Institutes.*

** *The New Apprenticeship System was launched in October 1990. The new system is attractive to school leavers who prefer to earn as they learn and employers who have the ability to train their own workers. Key features of the new system are : the need for pedagogic qualifed industry trainers, increased level of Skills Development Funds (SDF) training subsidies to employers, and continuing education for apprentices without adequate academic qualification.*

## INTAKE OF APPRENTICES BY SECTOR



## INTAKE OF APPRENTICES BY SECTOR AND TRADE CLUSTER

| SECTOR | TRADE CLUSTER | 1991 |
|---|---|---|
| **MANUFACTURING** | | |
| | Precision Engineering | 175 |
| | Electrical | 79 |
| | Electronics | 33 |
| | Automation | 9 |
| | Printing | 102 |
| | Woodbased | 39 |
| | **Subtotal** | **437** |
| **TECHNICAL SUPPORT** | | |
| | Aerospace | 324 |
| | Automotive | 187 |
| | Marine & Fabrication | 360 |
| | Mechanical & Maintenance | 76 |
| | **Subtotal** | **947** |
| **FINANCE & BUSINESS** | Business Studies | 21 |
| | **Subtotal** | **21** |
| **SERVICE** | | |
| | Garments/Textiles | 7 |
| | Hairstyling | 8 |
| | Hotel/Catering | 110 |
| | Retail Sales | 12 |
| | Travel | 52 |
| | **Subtotal** | **189** |
| | **Total** | **1,594** |

* *Refer to page 80 for the list of Apprenticeship courses by sector and trade cluster*

## INTAKE OF APPRENTICES BY LEVEL AND RACE

| Intake | 1991 | | | | |
|---|---|---|---|---|---|
| | Total | Chinese | Malay | Indian | Others |
| **Total** | **1,594** | **981** | **345** | **221** | **47** |
| **By Course Level** | | | | | |
| NTC-2 | 945 | 651 | 195 | 79 | 20 |
| COS | 21 | 6 | 10 | 4 | 1 |
| NTC-3 | 514 | 260 | 110 | 125 | 19 |
| CoC | 50 | 25 | 12 | 9 | 4 |
| Certificate in Service Skills | 64 | 39 | 18 | 4 | 3 |

## INTAKE OF APPRENTICES BY QUALIFICATION

| Intake | 1991 | | |
|---|---|---|---|
| | Total | Male | Female |
| **Total** | **1,594** | **1,378** | **216** |
| **By Educational Qualification** | | | |
| Below Primary 6 | 1 | 1 | 0 |
| BM4 | 26 | 23 | 3 |
| P8M | 132 | 124 | 8 |
| P8E/P6N/PSLE | 220 | 205 | 15 |
| S1 — S3 | 212 | 194 | 18 |
| S4/GCE 'N' | 299 | 277 | 22 |
| GCE 'O' | 663 | 537 | 126 |
| GCE 'A' | 41 | 17 | 24 |

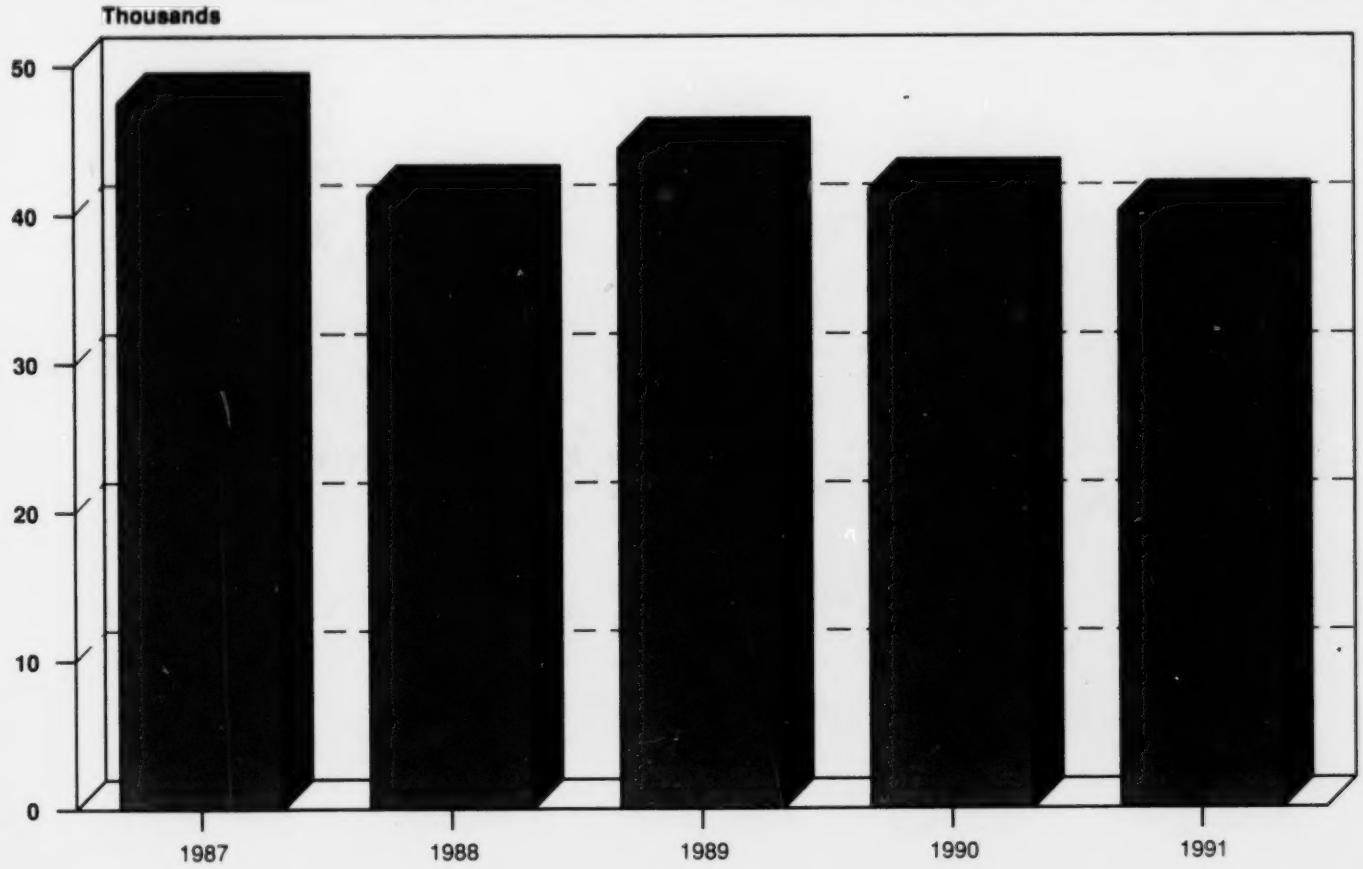
## APPRENTICES COMPLETED TRAINING IN 1991 BY SECTOR AND TRADE CLUSTER

| SECTOR | TRADE CLUSTER | 1991 |
|---|---|---|
| MANUFACTURING | Precision Engineering | 189 |
| | Electrical | 94 |
| | Printing | 124 |
| | Woodbased | 42 |
| | **Subtotal** | **449** |
| TECHNICAL SUPPORT | Aerospace | 126 |
| | Automotive | 59 |
| | Marine & Fabrication | 314 |
| | Mechanical & Maintenance | 36 |
| | **Subtotal** | **535** |
| SERVICE | Hotel/Catering | 97 |
| | **Subtotal** | **97** |
| | **Total** | **1,081** |

SECTION IV

# CONTINUING EDUCATION AND TRAINING

## TRAINING PLACES TAKEN UP UNDER CONTINUING SKILLS TRAINING AND EDUCATION (1987 — 1991)



## * TRAINING PLACES TAKEN UP UNDER CONTINUING SKILLS TRAINING AND EDUCATION (1987 — 1991)

| | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| **Total** | **47,550** | **41,324** | **44,479** | **41,685** | **40,197** |
| **By Course** | | | | | |
| Continuing Skills Training | 15,982 | 17,371 | 19,456 | 20,573 | 21,043 |
| Continuing Education Courses | 31,568 | 23,953 | 25,023 | 21,112 | 19,154 |

* *The training places taken up are not by headcounts. Training Places will correspond with the number of modules and subjects taken up by participants under the 'MOST' Scheme and continuing education courses.*

## TRAINING PLACES TAKEN UP
## UNDER THE CONTINUING SKILLS TRAINING AND CONTINUING EDUCATION COURSES BY LEVEL

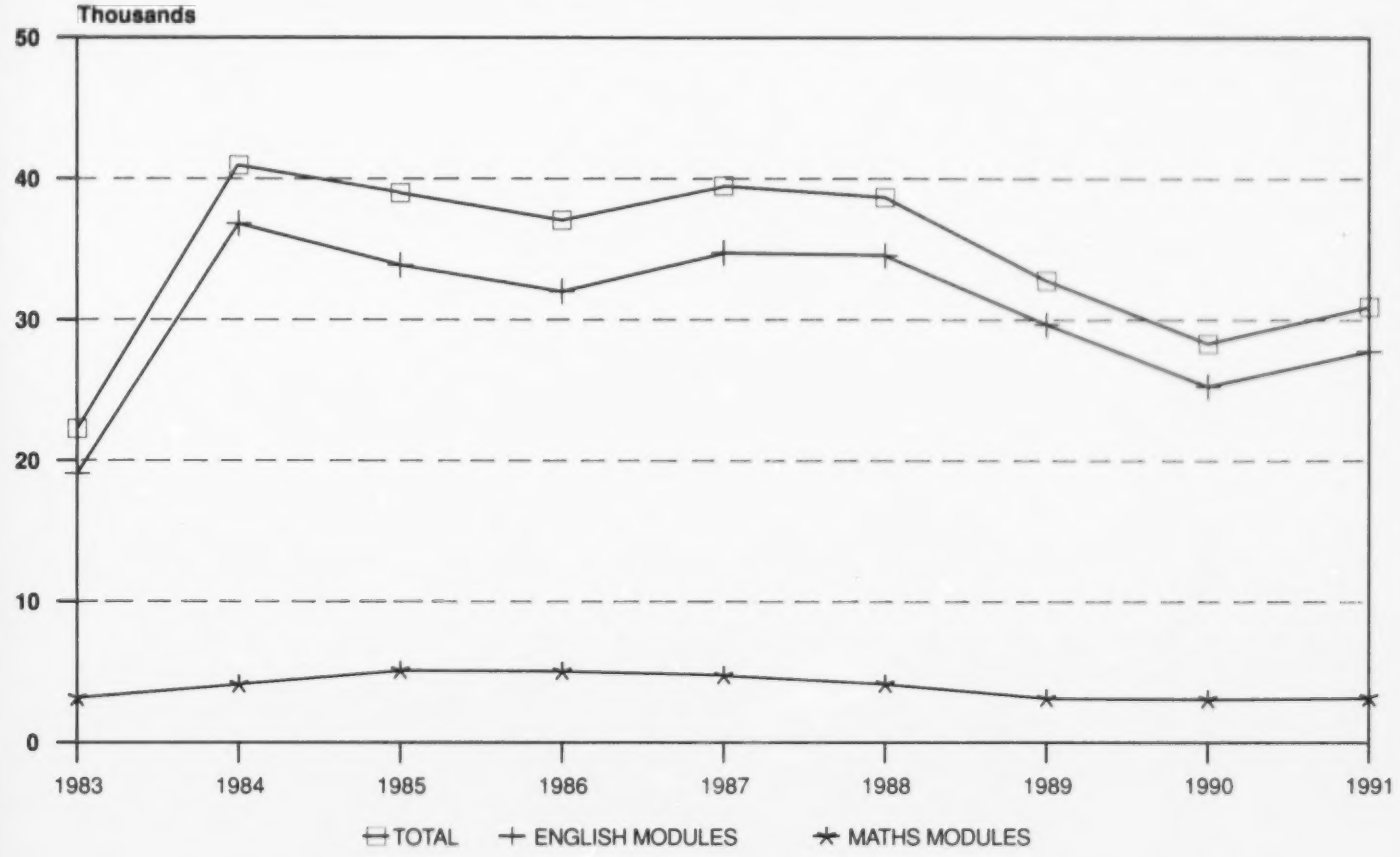
| 1991 | |
|---|---|
| **Continuing Skills Training** | |
| **Total** | **21,043** |
| **By Level** | |
| ITC | 531 |
| NTC-2 | 5,123 |
| NTC-3 | 14,981 |
| CoC | 107 |
| Other Skills Courses | 301 |

| 1991 | |
|---|---|
| **Continuing Education Courses** | |
| **Total** | **19,154** |
| **By Level** | |
| Secondary 1N | 1,586 |
| Secondary 2N | 1,246 |
| Secondary 3N | 1,970 |
| Secondary 4N | 3,431 |
| Secondary 5N (Including GCE 'O' Revision) | 5,059 |
| Pre-University 1 | 1,963 |
| Pre-University 2 (Including GCE 'A' Revision) | 3,899 |

SECTION V

# WORKER EDUCATION

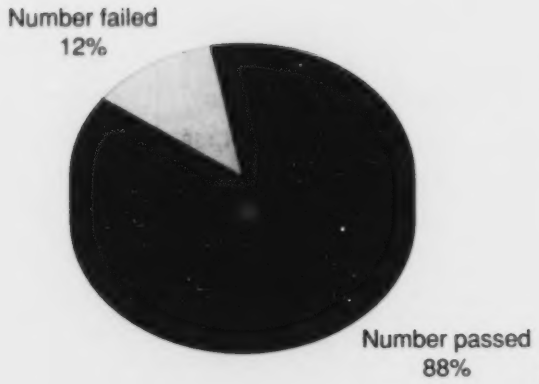
## TRAINING PLACES TAKEN UP BY BEST PARTICIPANTS (1983 — 1991)



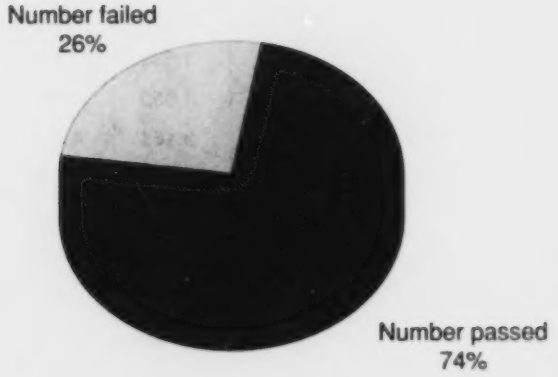
## TRAINING PLACES TAKEN UP BY BEST PARTICIPANTS BY LEVEL ( 1983 — 1991 )

| BEST Programme | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **22,247** | **40,958** | **38,998** | **37,059** | **39,501** | **38,694** | **32,787** | **28,320** | **30,956** |
| **By Type of Module and Level** | | | | | | | | | |
| **ENGLISH MODULES** | **19,079** | **36,824** | **33,880** | **32,016** | **34,755** | **34,556** | **29,669** | **25,273** | **27,766** |
| Module 1 | 9,018 | 10,910 | 7,674 | 12,326 | 9,725 | 11,574 | 7,564 | 7,036 | 7,774 |
| Module 2 | 4,322 | 9,584 | 7,278 | 6,980 | 9,429 | 7,699 | 6,242 | 5,898 | 6,529 |
| Module 3 | 1,680 | 7,144 | 8,427 | 5,682 | 7,333 | 6,326 | 6,597 | 5,185 | 5,579 |
| Module 4 | 4,059 | 9,186 | 10,501 | 7,028 | 8,268 | 8,957 | 9,266 | 7,154 | 7,884 |
| **MATHEMATICS MODULES** | **3,168** | **4,134** | **5,118** | **5,043** | **4,746** | **4,138** | **3,118** | **3,047** | **3,190** |
| Module 1 | 1,377 | 1,002 | 829 | 882 | 541 | 662 | 1,074 | 472 | 552 |
| Module 2 | 524 | 689 | 1,345 | 866 | 838 | 604 | 572 | 543 | 446 |
| Module 3 | 282 | 856 | 1,156 | 1,148 | 1,216 | 842 | 361 | 525 | 598 |
| Module 4 | 985 | 1,587 | 1,788 | 2,147 | 2,151 | 2,030 | 1,111 | 1,507 | 1,594 |

## PERFORMANCE OF BEST PARTICIPANTS
## 1991




**English Modules**

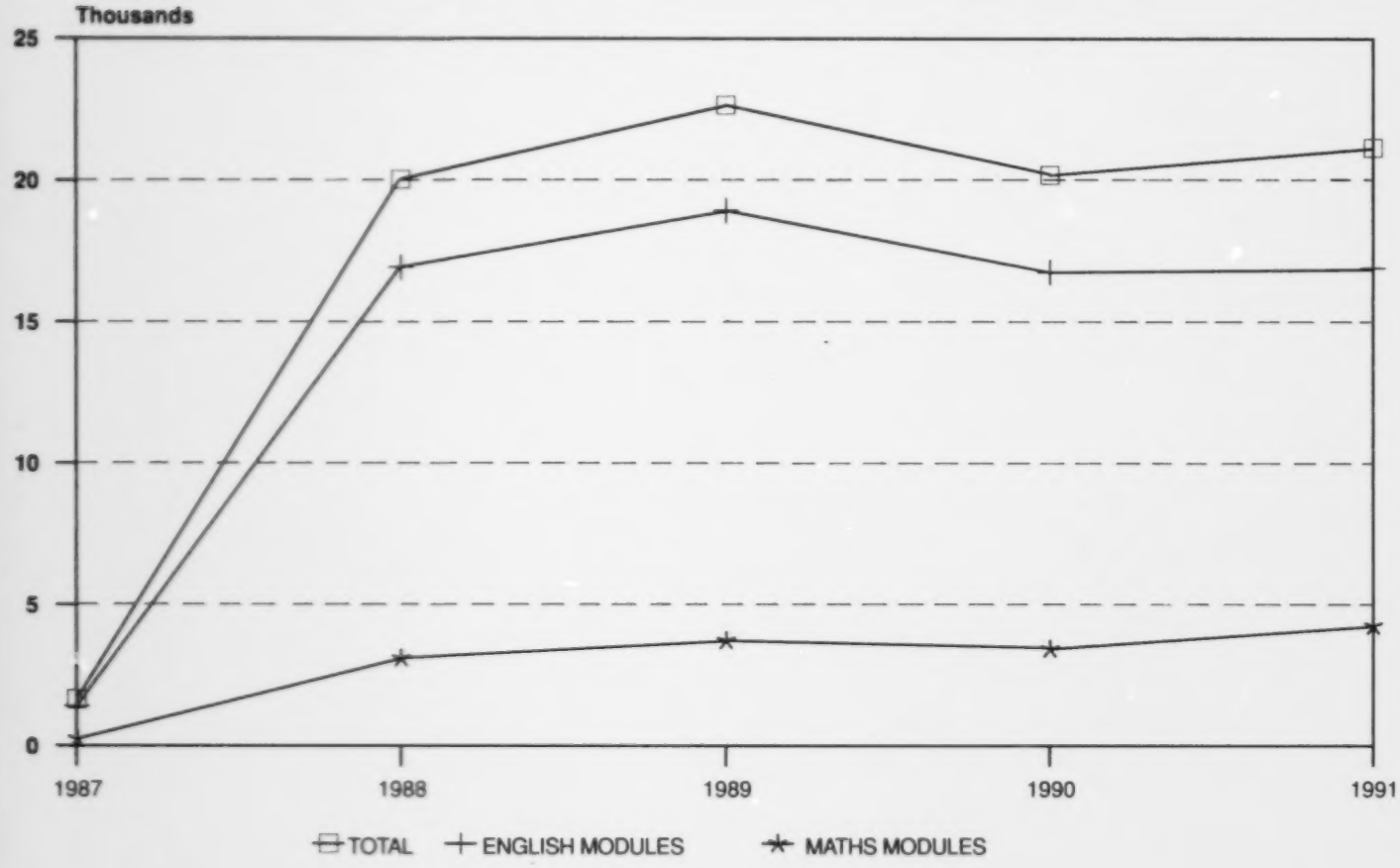



**Mathematics Modules**

## EXAMINATION RESULTS OF BEST PARTICIPANTS ( 1983 — 1991 )

| BEST Programme | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|
| **ENGLISH MODULES** | | | | | | | | | |
| Number registered for examination | 15,183 | 30,377 | 29,343 | 28,056 | 30,575 | 31,503 | 28,693 | 25,373 | 26,506 |
| Number took examination | 12,418 | 22,313 | 18,824 | 17,655 | 18,448 | 18,695 | 17,089 | 16,547 | 16,404 |
| Number passed examination | 11,595 | 20,542 | 16,046 | 14,892 | 16,128 | 15,705 | 14,165 | 13,458 | 14,403 |
| Pass Rate | 93% | 92% | 85% | 84% | 87% | 84% | 83% | 81% | 88% |
| **MATHEMATICS MODULES** | | | | | | | | | |
| Number registered for examination | 2,035 | 3,499 | 4,344 | 4,431 | 3,840 | 3,762 | 2,961 | 2,968 | 3,163 |
| Number took examination | 1,639 | 2,422 | 2,943 | 3,066 | 2,612 | 2,401 | 2,043 | 2,242 | 2,214 |
| Number passed examination | 1,382 | 1,984 | 2,584 | 2,750 | 2,241 | 1,994 | 1,575 | 1,761 | 1,647 |
| Pass Rate | 84% | 82% | 88% | 90% | 86% | 83% | 77% | 79% | 74% |

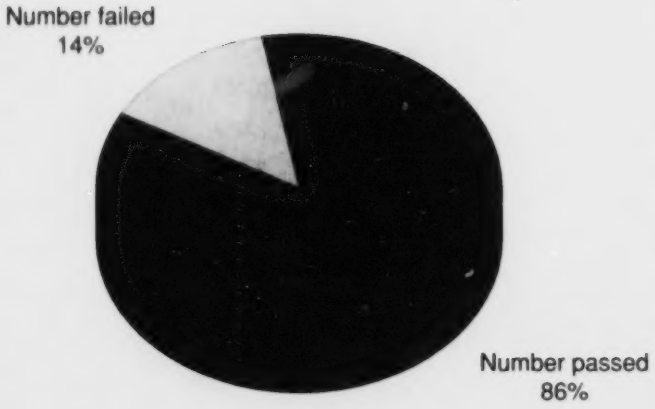
## TRAINING PLACES TAKEN UP BY WISE PARTICIPANTS (1987 — 1991)



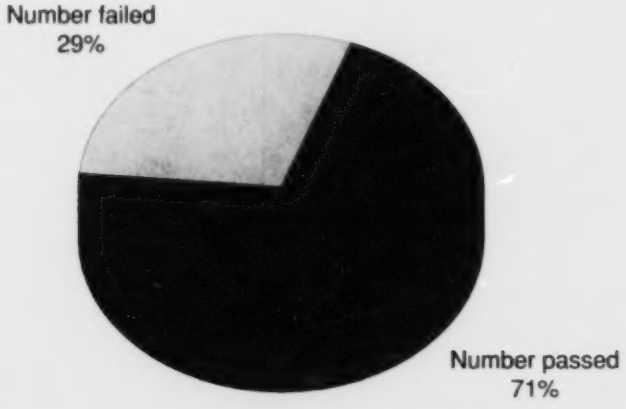
## TRAINING PLACES TAKEN UP BY WISE PARTICIPANTS BY LEVEL (1987—1991)

| WISE Programme | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| **Total** | **1,643** | **20,041** | **22,652** | **20,178** | **21,148** |
| **By Type of Module and Level** | | | | | |
| **ENGLISH MODULES** | **1,407** | **16,935** | **18,928** | **16,748** | **16,899** |
| Module 1 | 1,215 | 9,089 | 5,176 | 5,761 | 5,905 |
| Module 2 | 192 | 5,211 | 4,565 | 3,905 | 4,501 |
| Module 3 | — | 2,130 | 5,422 | 3,749 | 3,756 |
| Module 4 | — | 505 | 3,765 | 3,333 | 2,737 |
| **MATHEMATICS MODULES** | **236** | **3,106** | **3,724** | **3,430** | **4,249** |
| Module 1 | 210 | 1,707 | 1,250 | 1,204 | 1,550 |
| Module 2 | 26 | 992 | 820 | 880 | 1,194 |
| Module 3 | — | 353 | 1,018 | 766 | 878 |
| Module 4 | — | 54 | 636 | 580 | 627 |

## PERFORMANCE OF WISE PARTICIPANTS
## 1991




**English Modules**




**Mathematics Modules**

## EXAMINATION RESULTS OF WISE PARTICIPANTS (1988 — 1991)

| WISE Programme | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|
| **ENGLISH MODULES** | | | | |
| Number registered for examination | 8,624 | 16,213 | 12,897 | 13,666 |
| Number took examination | 5,633 | 11,054 | 8,586 | 8,803 |
| Number passed examination | 5,512 | 10,127 | 7,591 | 7,550 |
| Pass Rate | 98% | 92% | 88% | 86% |
| **MATHEMATICS MODULES** | | | | |
| Number registered for examination | 1,640 | 3,174 | 2,803 | 3,265 |
| Number took examination | 1,096 | 2,158 | 1,898 | 2,270 |
| Number passed examination | 872 | 1,725 | 1,365 | 1,608 |
| Pass Rate | 80% | 80% | 72% | 71% |

## TRAINING PLACES TAKEN UP BY BEST PARTICIPANTS BY TYPE OF CENTRE ( 1983 — 1991 )

| BEST Programme | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|
| **Total** | **22,247** | **40,958** | **38,998** | **37,059** | **39,501** | **38,694** | **32,787** | **28,320** | **30,956** |
| **By Type of Module and Centre** | | | | | | | | | |
| **ENGLISH MODULES** | **19,079** | **36,824** | **33,880** | **32,016** | **34,755** | **34,556** | **29,669** | **25,273** | **27,766** |
| Companies | 9,794 | 15,175 | 11,429 | 12,403 | 14,947 | 13,721 | 10,443 | 9,317 | 9,313 |
| NTUC/PAP | 5,377 | 13,056 | 13,748 | 12,100 | 11,464 | 11,025 | 9,210 | 6,592 | 6,637 |
| VITB | 1,692 | 2,444 | 3,561 | 3,161 | 4,503 | 6,747 | 7,185 | 7,832 | 10,329 |
| Ministry of Defence | 2,216 | 6,149 | 5,142 | 4,352 | 3,841 | 3,063 | 2,831 | 1,532 | 1,487 |
| **MATHEMATICS MODULES** | **3,168** | **4,134** | **5,118** | **5,043** | **4,746** | **4,138** | **3,118** | **3,047** | **3,190** |
| Companies | 1,553 | 1,967 | 2,350 | 2,448 | 1,965 | 1,460 | 1,065 | 1,170 | 1,342 |
| NTUC/PAP | 924 | 1,262 | 1,990 | 1,780 | 1,423 | 952 | 594 | 300 | 342 |
| VITB | 691 | 905 | 778 | 815 | 1,358 | 1,726 | 1,459 | 1,577 | 1,506 |

## TRAINING PLACES TAKEN UP BY WISE PARTICIPANTS BY TYPE OF CENTRE (1987 — 1991)

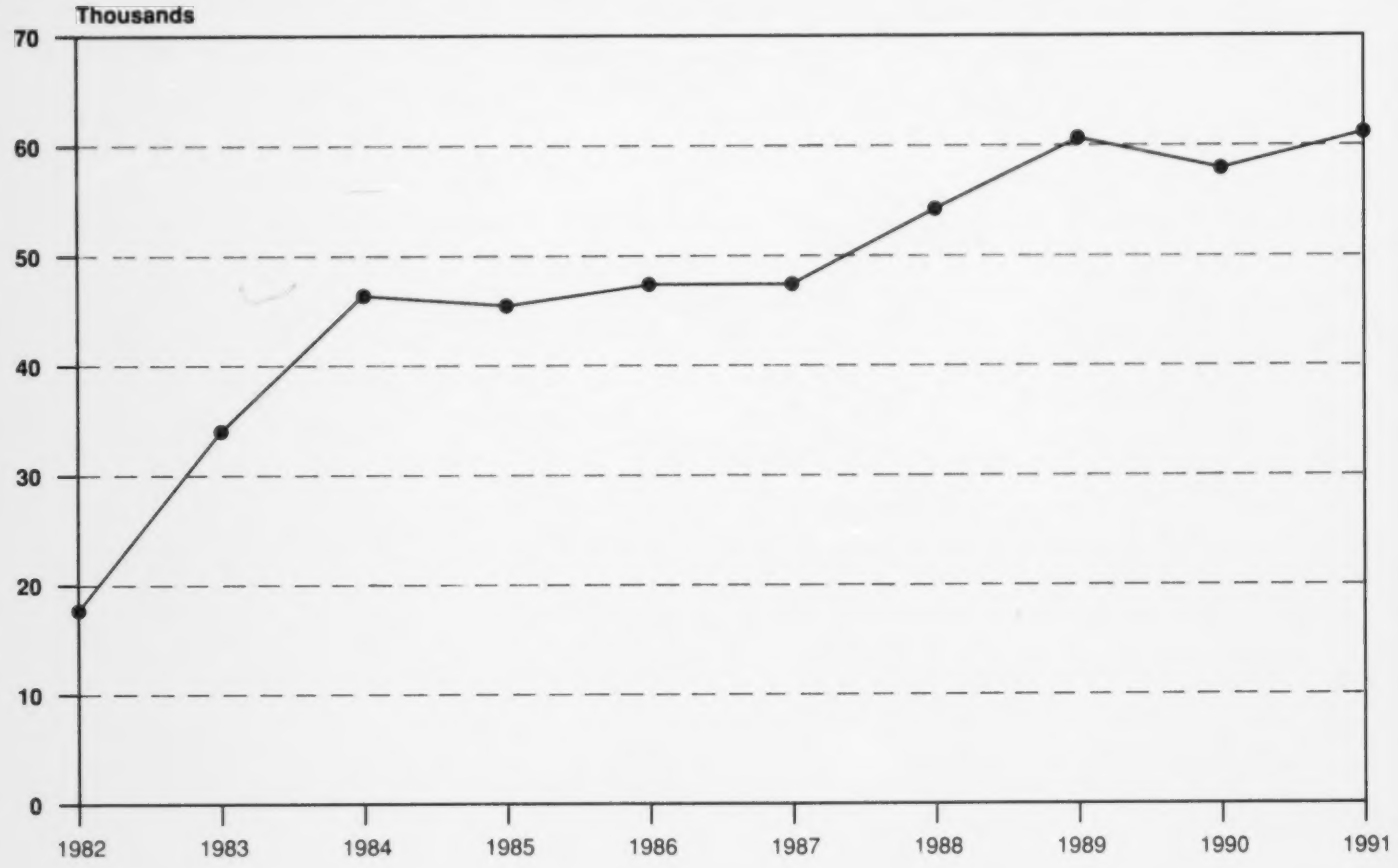
| WISE Programme | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| **Total** | **1,643** | **20,041** | **22,652** | **20,178** | **21,148** |
| **By Type of Module and Centre** | | | | | |
| **ENGLISH MODULES** | **1,407** | **16,935** | **18,928** | **16,748** | **16,899** |
| Companies | 622 | 8,103 | 8,409 | 6,968 | 6,031 |
| NTUC/PAP | 340 | 3,017 | 3,648 | 2,921 | 2,907 |
| VITB | 373 | 5,815 | 6,871 | 6,859 | 7,961 |
| Ministry of Defence * | 72 | — | — | — | — |
| **MATHEMATICS MODULES** | **236** | **3,106** | **3,724** | **3,430** | **4,249** |
| Companies | 49 | 956 | 1,075 | 896 | 830 |
| NTUC/PAP | 31 | 243 | 312 | 217 | 306 |
| VITB | 156 | 1,907 | 2,337 | 2,317 | 3,113 |

* *From 1988, Ministry of Defence is subsumed under company centres.*

SECTION VI

# TRADE TESTING AND CERTIFICATION

## CANDIDATURE FOR EXAMINATION AND TRADE TESTING (1982 — 1991)



## CANDIDATURE BY TYPE OF TEST/EXAM (1982 — 1991)

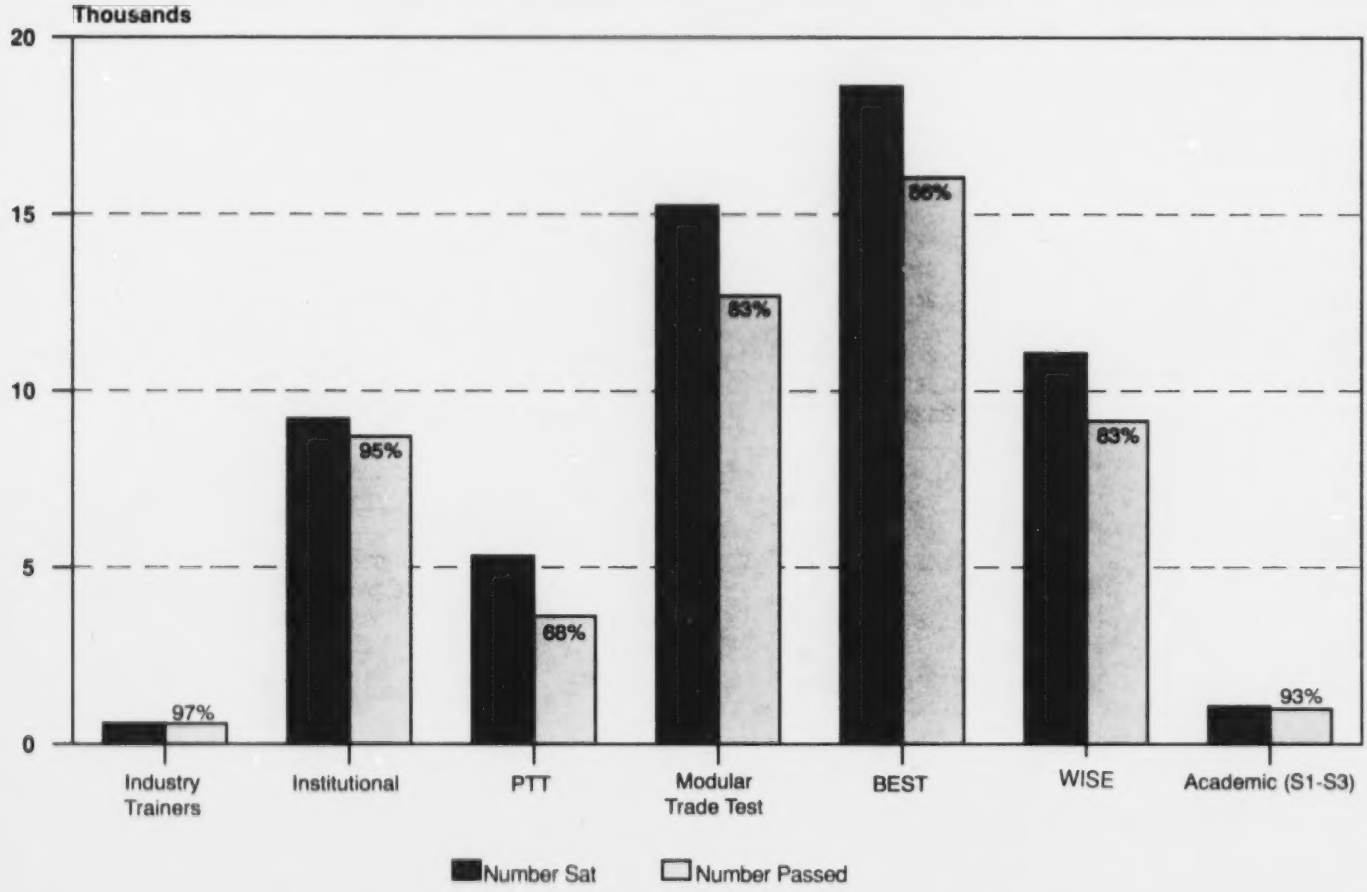
| Candidature (Number Sat) | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **17,668** | **33,978** | **46,369** | **45,445** | **47,369** | **47,396** | **54,227** | **60,646** | **57,909** | **61,164** |
| **By Type of Test/Exam** | | | | | | | | | | |
| Institutional+ | 6,987 | 7,476 | 7,839 | 10,326 | 12,215 | 11,789 | 11,160 | 9,531 | 9,793 | 9,218 |
| Public Trade Test | 8,032 | 7,545 | 6,431 | 5,414 | 4,396 | 4,425 | 4,321 | 4,771 | 3,631 | 5,330 |
| Modular Trade Test | — | 2,121 | 4,142 | 4,598 | 7,038 | 8,359 | 9,491 | 12,777 | 14,000 | 15,247 |
| BEST | 555 | 14,057 | 24,735 | 21,767 | 20,721 | 21,060 | 21,096 | 19,132 | 18,789 | 18,618 |
| WISE | — | — | — | — | — | — | 6,729 | 13,212 | 10,484 | 11,073 |
| Academic (S1 — S3) | 2,060 | 2,359 | 2,768 | 2,880 | 2,779 | 1,634 | 1,399 | 1,203 | 1,132 | 1,067 |
| Industry Trainers | — | — | — | — | — | — | — | — | — | 592 |
| CVE | 34 | 310 | 247 | 321 | 184 | 82 | 10 | 6 | 7 | — |
| PCVA | — | — | — | — | — | — | — | — | 7 | — |
| Others | — | 110 | 207 | 139 | 36 | 47 | 21 | 14 | 66 | 19 |

\+ *Includes candidates from the Government Training Centres and Approved Training Centres.*

## CANDIDATURE BY COURSE LEVEL (1982 — 1991)

| Candidature (Number Sat) | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **17,668** | **33,978** | **46,369** | **45,445** | **47,369** | **47,396** | **54,227** | **60,646** | **57,909** | **61,164** |
| **By Course Level** | | | | | | | | | | |
| Diploma | — | 37 | 33 | 65 | 68 | 66 | 80 | 81 | 85 | — |
| NTC-1 | — | — | — | — | — | — | 14 | 21 | 19 | 28 |
| ITC | 936 | 827 | 824 | 764 | 901 | 1,420 | 1,357 | 1,556 | 1,709 | 1,418 |
| CBS | 449 | 370 | 548 | 536 | 537 | 469 | 762 | 729 | 802 | 831 |
| NTC-2 | 3,153 | 3,246 | 3,153 | 2,613 | 2,876 | 3,531 | 3,269 | 3,711 | 3,511 | 3,425 |
| NTC-2 (Modular) | — | — | — | — | — | — | 155 | 1,198 | 1,417 | 2,165 |
| PCBS/COS | 384 | 210 | 970 | 921 | 1,250 | 1,355 | 1,542 | 1,435 | 1,279 | 1,200 |
| NTC-3 | 9,290 | 9,583 | 7,887 | 8,538 | 8,193 | 6,258 | 6,130 | 6,538 | 5,436 | 7,082 |
| NTC-3 (Modular) | — | 2,121 | 4,142 | 4,598 | 7,038 | 8,359 | 9,336 | 11,500 | 12,497 | 13,028 |
| CoVT | — | — | — | — | — | — | — | — | 394 | 217 |
| PVT | — | — | 112 | 1,885 | 2,362 | 2,719 | 2,105 | — | — | — |
| CoC | 807 | 748 | 743 | 418 | 424 | 396 | 222 | 231 | 189 | 221 |
| CoC (Modular) | — | — | — | — | — | — | — | 79 | 86 | 54 |
| BEST | 555 | 14,057 | 24,735 | 21,767 | 20,721 | 21,060 | 21,096 | 19,132 | 18,789 | 18,618 |
| WISE | — | — | — | — | — | — | 6,729 | 13,212 | 10,484 | 11,073 |
| Academic (S1 — S3) | 2,060 | 2,359 | 2,768 | 2,880 | 2,779 | 1,634 | 1,399 | 1,203 | 1,132 | 1,067 |
| Industry Trainers | — | — | — | — | — | — | — | — | — | 592 |
| CVE | 34 | 310 | 247 | 321 | 184 | 82 | 10 | 6 | 7 | — |
| PCVA | — | — | — | — | — | — | — | — | 7 | — |
| Certificate in Travel Services (General) | — | — | — | — | — | — | — | — | — | 29 |
| Certificate in Retailing (Sales & Customer Service) | — | — | — | — | — | — | — | — | — | 97 |
| Others | — | 110 | 207 | 139 | 36 | 47 | 21 | 14 | 66 | 19 |

## CANDIDATURES AND PASSES BY TYPE OF TEST/EXAM



## DISTRIBUTION OF CANDIDATURES AND PASSES BY TYPE OF TEST/EXAM

| | 1991 | | |
|---|---|---|---|
| | **No. Sat (Candidature)** | **No. Passed *** | **Percent Passed** |
| **Total** | **61,164** | **51,825** | **85%** |
| **By Type of Test/Exam** | | | |
| Institutional+ | 9,218 | 8,713 | 95% |
| Public Trade Test | 5,330 | 3,618 | 68% |
| Modular Trade Test | 15,247 | 12,699 | 83% |
| BEST | 18,618 | 16,050 | 86% |
| WISE | 11,073 | 9,158 | 83% |
| Academic (S1 — S3) | 1,067 | 995 | 93% |
| Industry Trainers | 592 | 574 | 97% |
| Others | 19 | 18 | 95% |

*Note :* * *'Number Passed' refers to candidates issued with certificates (on passing practical and theory or practical only) as well as those issued with statements (i.e. passed theory only)*

\+ *Includes candidates from the Government Training Centres and Approved Training Centres.*

## NUMBER CERTIFIED THROUGH THE INSTITUTIONAL, PUBLIC AND MODULAR TRADE TESTS

| | 1991 | | | |
|---|---|---|---|---|
| | **Total** | **Institutional +** | **Public** | **Modular *** |
| **Total** | **25,030** | **8,713** | **3,618** | **12,699** |
| **By Course Level** | | | | |
| NTC-1 | 28 | 28 | — | — |
| ITC | 1,296 | 1,296 | — | — |
| CBS | 707 | 707 | — | — |
| NTC-2 | 4,522 | 2,416 | 532 | 1,574 |
| COS | 1,074 | 1,074 | — | — |
| NTC-3 | 16,822 | 2,804 | 2,947 | 11,071 |
| CoVT | 209 | 209 | — | — |
| CoC | 252 | 70 | 128 | 54 |
| Certificate in Travel Services (General) | 29 | 29 | — | — |
| Certificate in Retailing (Sales & Customer Service) | 91 | 80 | 11 | — |

\+ *Includes candidates from the Government Training Centres and Approved Training Centres.*

* *'Number certified' through the Modular Trade Tests is not by 'headcount'. A person is counted twice if he has obtained two Module certificates.*

## SECTION VII

# MISCELLANEOUS

## LIST OF ON-GOING FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Launching | Year of First Output |
|---|---|---|
| **Industrial Technician Certificate Courses** | | |
| Electrical Engineering | 1971 | 1973 |
| Electronics Engineering | 1969 | 1971 |
| Electro-Mechanical Engineering | 1988 | 1990 |
| Mechanical & Electrical Drafting & Design | 1971 | 1973 |
| Mechanical Engineering | 1969 | 1971 |
| **Business Studies Courses** | | |
| Certificate in Business Studies — Accounting | 1981 | 1983 |
| Certificate in Business Studies — Secretarial Practice | 1981 | 1983 |
| Certificate in Office Skills [Preliminary Certificate in Business Studies] | 1981 | 1981 |
| **National Technical Certificate Grade 2 Courses** | | |
| Air-Conditioning & Refrigeration [Air-Conditioning & Refrigeration Mechanics] | 1981 | 1981 |
| Architectural Drafting | 1981 | 1981 |
| Civil/Structural Drafting | 1982 | 1982 |
| Fashion Garment [Dressmaking] | 1986 | 1987 |
| Electrical Installation & Servicing [Electrical Fitting & Installation] | 1981 | 1981 |
| Electrical Power & Machines | 1984 | 1985 |
| Electro-Mechanical Servicing | 1985 | 1987 |
| Electronics Servicing (Digital Equipment) | 1980 | 1982 |
| Electronics Servicing (Electronics Instrumentation) | 1987 | 1989 |
| Electronics Servicing (Video Technology) [Electronics Servicing (Video Equipment)] | 1983 | 1984 |
| Diesel Engine Mechanics [Heavy Duty Diesel Mechanics] | 1985 | 1987 |
| Mechanical Servicing [Maintenance Fitting] | 1985 | 1987 |
| Motor Vehicle Mechanics | 1980 | 1981 |

## LIST OF ON-GOING FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Launching | Year of First Output |
|---|---|---|
| Precision Machining | 1980 | 1980 |
| Precision Tooling (Injection Mould) [Tool & Die Making (Injection Mould)] | 1980 | 1981 |
| Precision Tooling (Press Tool) [Tool & Die Making (Press Tool)] | 1981 | 1982 |
| **National Technical Certificate Grade 3 Courses** | | |
| Air-Conditioning & Refrigeration [Air-Conditioning & Refrigeration Mechanics] | 1974 | 1975 |
| Building Drafting | 1974 | 1974 |
| Building Servicing | 1986 | 1986 |
| Fashion Garment [Dressmaking] | 1975 | 1976 |
| Electrical Installation & Servicing [Electrical Fitting & Installation] | 1974 | 1974 |
| Electronics Servicing | 1974 | 1974 |
| Furniture Production | 1982 | 1983 |
| General Welding | 1974 | 1974 |
| Graphic Reproduction | 1979 | 1980 |
| Hairstyling [Hairdressing] | 1979 | 1979 |
| Diesel Engine Mechanics [Heavy Duty Diesel Mechanics] | 1974 | 1974 |
| Mechanical Servicing [Maintenance Fitting] | 1974 | 1974 |
| Marine Mechanics [Marine Fitting] | 1975 | 1975 |
| Precision Machining [Metal Machining] | 1974 | 1974 |
| Motor Vehicle Mechanics | 1974 | 1974 |
| Offset Printing | 1974 | 1974 |
| Upholstery | 1975 | 1976 |
| **Basic Vocational Training Courses** | | |
| Basic Vocational Training 1st Year | 1984 | 1984 |
| Basic Vocational Training 2nd Year | 1980 | 1981 |

* *Course titles in parenthesis [ ] state the former course titles of the respective courses.*

## LIST OF ON-GOING FULL-TIME COURSES BY SECTOR AND TRADE CLUSTER (AS AT 1991)

| SECTOR | TRADE CLUSTER | COURSE |
|---|---|---|
| MANUFACTURING | PRECISION ENGINEERING | ITC Mechanical Engineering<br>NTC-2 Precision Machining<br>NTC-2 Precision Tooling (Injection Mould)<br>NTC-2 Precision Tooling (Press Tool)<br>NTC-3 Precision Machining |
| | ELECTRICAL | ITC Electrical Engineering<br>NTC-2/3 Electrical Installation & Servicing<br>NTC-2 Electrical Power & Machines |
| | ELECTRONICS | ITC Electronics Engineering<br>NTC-2 Electronics Servicing (Digital Equipment)<br>NTC-2 Electronics Servicing (Video Technology)<br>NTC-2 Electronics Servicing (Electronics Instrumentation)<br>NTC-3 Electronics Servicing<br>Certificate of Vocational Training |
| | AUTOMATION | ITC Electro-Mechanical Engineering<br>NTC-2 Electro-Mechanical Servicing |
| | PRINTING | NTC-2/3 Graphic Reproduction<br>NTC-2/3 Offset Printing |
| | WOODBASED | NTC-3 Furniture Production<br>NTC-3 Upholstery |

## LIST OF ON-GOING FULL-TIME COURSES BY SECTOR AND TRADE CLUSTER (AS AT 1991)

| SECTOR | TRADE CLUSTER | COURSE |
|---|---|---|
| FINANCE & BUSINESS | BUSINESS STUDIES | CBS (Accounting)<br>CBS (Secretarial Practice)<br>Certificate in Office Skills |
| TECHNICAL SUPPORT | MECHANICAL & MAINTENANCE | NTC-2/3 Air-Conditioning & Refrigeration<br>NTC-2/3 Mechanical Servicing |
| | AUTOMOTIVE | NTC-2/3 Motor Vehicle Mechanics<br>NTC-2/3 Diesel Engine Mechanics |
| | DRAFTING & BUILDING SERVICING | ITC Mechanical & Electrical Drafting & Design<br>NTC-2 Architectural Drafting<br>NTC-2 Civil & Structural Drafting<br>NTC-3 Building Drafting<br>NTC-3 Building Servicing |
| | MARINE & FABRICATION | NTC-3 General Welding<br>NTC-3 Marine Mechanics |
| SERVICE | RETAIL SALES | Certificate of Vocational Training |
| | HOTEL/CATERING | Certificate of Vocational Training |
| | GARMENTS/ TEXTILES | NTC-2/3 Fashion Garment<br>Certificate of Vocational Training |
| | HAIRSTYLING | NTC-3 Hairstyling |

## LIST OF ON-GOING APPRENTICESHIP COURSES BY SECTOR AND TRADE CLUSTER (AS AT 1991)

| SECTOR | TRADE CLUSTER | COURSE |
|---|---|---|
| MANUFACTURING | PRECISION ENGINEERING | NTC-2 Precision Machining<br>NTC-2 Precision Optics<br>CoC Die-Casting Machine Setting<br>CoC Heat Treatment |
| | ELECTRICAL | NTC-2/3 Electrical Installation & Servicing<br>NTC-2 Electrical Power & Machines |
| | ELECTRONICS | NTC-2/3 Electronics Servicing (Digital Equipment) |
| | AUTOMATION | NTC-2 Electro-Mechanical Servicing |
| | PRINTING | NTC-2/3 Graphic Reproduction<br>NTC-2/3 Offset Printing |
| | WOODBASED | NTC-2/3 Furniture Production<br>CoC Woodworking Machine Operations |
| FINANCE & BUSINESS | BUSINESS STUDIES | Certificate in Office Skills |
| TECHNICAL SUPPORT | AEROSPACE | NTC-2 Aircraft Mechanics (Electrical & Instruments)<br>NTC-2/3 Aircraft Mechanics (Airframe & Engines)<br>NTC-2 Aircraft Mechanics (Radar & Communication)<br>NTC-3 Aircraft Mechanics (Sheetmetal) |
| | AUTOMOTIVE | NTC-2/3 Motor Vehicle Mechanics<br>NTC-2 Diesel Engine Mechanics<br>Certificate in Motor Vehicle Inspection |

## LIST OF ON-GOING APPRENTICESHIP COURSES BY SECTOR AND TRADE CLUSTER (AS AT 1991)

| SECTOR | TRADE CLUSTER | COURSE |
|---|---|---|
| TECHNICAL SUPPORT | MARINE & FABRICATION | NTC-2/3 Boiler/Pipe Fitting & Servicing<br>NTC-2/3 Marine Mechanics<br>NTC-2/3 Marine Steelwork<br>NTC-2 Welding<br>NTC-2 Watchkeeping<br>NTC-2 Plant Maintenance Mechanics<br>NTC-3 General Welding |
| | MECHANICAL & MAINTENANCE | NTC-2 Air-Conditioning & Refrigeration<br>NTC-2/3 Mechanical Servicing |
| SERVICE | RETAIL SALES | Certificate in Retailing (Sales & Customer Service) |
| | HOTEL/CATERING | NTC-2/3 Food & Beverage<br>NTC-2/3 Food Preparation<br>NTC-2 Front Office Operations |
| | GARMENTS/TEXTILES | NTC-3 Fashion Garment |
| | HAIRSTYLING | NTC-3 Hairstyling |
| | TRAVEL | Certificate in Travel Services (General) |

## LIST OF DISCONTINUED FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Final Output |
|---|---|
| **Diploma in Applied Arts Courses*** | |
| Graphic Design | 1990 |
| Interior Design | 1990 |
| Product Design | N.A. |
| **Industrial Technician Certificate Courses** | |
| Advertising Arts | 1981 |
| Air-Conditioning & Refrigeration Engineering | 1984 |
| Auto/Industrial Plant Engineering | 1980 |
| Automotive Engineering | 1984 |
| Fashion Arts | 1977 |
| Furniture Design & Production | 1984 |
| Industrial Plant Engineering | 1982 |
| Interior Design | 1980 |
| Letterpress Printing Processes | 1976 |
| Offset Litho Printing Processes | 1978 |
| Printing Technology (Pre-Press) | 1980 |
| Printing Technologh (Press Work) | 1980 |
| Three-Dimensional Design | 1982 |
| **National Trade Certificate Grade 2 Courses** | |
| Arc Welding | 1986 |
| Electrical Drafting | 1982 |
| Electronics Servicing (TV) | 1982 |
| Pattern Making | 1984 |
| Plumbing & Pipe Fitting | 1984 |
| Hairdressing | 1991 |

## LIST OF DISCONTINUED FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Final Output |
|---|---|
| **National Trade Certificate Grade 3 Courses** | |
| Accommodation Operations | 1982 |
| Advertising Arts | 1975 |
| Applied Sculpture | 1975 |
| Binding & Finishing/Bindery | 1975 |
| Boiler Pipe Fitting & Servicing | 1984 |
| Carpentry | 1976 |
| Ceramics Art | 1974 |
| Composing/Compositor's Work | 1979 |
| Electricity | 1976 |
| Fabric Design & Printing | 1975 |
| Fabric Design & Silkscreen Work | 1975 |
| Fashion Arts | 1975 |
| Fine Jewellery | 1977 |
| Food & Beverage | 1981 |
| Furniture Making | 1987 |
| Interior Design | 1974 |
| Letterpress Printing | 1982 |
| Lift & Escalator Mechanics | 1986 |
| Lithotype and Work Composing | 1976 |
| Machine Woodworking/Woodmachining | 1981 |
| Marine Pipe Fitting | 1979 |
| Marine Pipe Fitting/Boiler Work | 1975 |
| Marine Steelwork | 1984 |
| Mechanical Drafting | 1982 |
| Men's Tailoring | 1990 |

## LIST OF DISCONTINUED FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Final Output |
|---|---|
| Metal Fabrication | 1990 |
| Metal Shipwright/Hull Fabrication/Marine Steelwork | 1980 |
| Offset Plate Making | 1975 |
| Offset Presswork/Printing Presswork | 1982 |
| Offset Reproduction | 1982 |
| Pattern Making | 1982 |
| Plumbing & Pipe Fitting | 1984 |
| Reproduction Photography | 1974 |
| Sheetmetal/Metal Fabrication | 1983 |
| Shipbuilding Fabrication | 1975 |
| Shipwright/Marine Fitting | 1976 |
| Steelwork Fabrication | 1977 |
| Steelwork/Welding | 1976 |
| Watch Repairing | 1982 |
| **Business Studies Courses** | |
| Accounts Clerk | 1980 |
| Advanced Accounts Clerk | 1979 |
| Certificate in Accounting (1st Year) | 1979 |
| Certificate in Accounting (2nd Year) | 1982 |
| Certificate in Clerical Practice | 1981 |
| Commercial Practice | 1980 |
| Private Secretary's Certificate | 1981 |
| Secretarial Training | 1974 |
| School Certificate of Commercial Education | 1976 |

## LIST OF DISCONTINUED FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Final Output |
|---|---|
| **Certificate of Competency Courses** | |
| Arc Welding | 1974 |
| Barbending | 1984 |
| Basic Joinery | 1980 |
| Binding & Finishing/Bindery | 1984 |
| Bricklaying & Plastering | 1974 |
| Bricklaying | 1984 |
| Building Carpentry | 1984 |
| Cane/Rattanwork | 1974 |
| Cane Furniture | 1978 |
| Cane Wickerwork | 1974 |
| Carpentry Formwork | 1974 |
| Carpentry Joinery | 1974 |
| Ceramic Arts | 1976 |
| Doll & Flowermaking | 1974 |
| Dressmaking | 1975 |
| Electrical Fitting & Installation | 1979 |
| Electrical Wiring | 1985 |
| Furniture Upholstery | 1974 |
| Industrial Sewing Machine Mechanics | 1982 |
| Masonry | 1980 |
| Offset Platemaking | 1977 |
| Painting & Decorating | 1984 |
| Panel Beating | 1977 |
| Pipe Fitting | 1984 |

## LIST OF DISCONTINUED FULL-TIME COURSES (AS AT 1991)

| Level/Course | Year of Final Output |
|---|---|
| Plastering | 1984 |
| Sewing Assistant | 1976 |
| Sheetmetal/Metal Fabrication | 1977 |
| Shellcraft | 1974 |
| Spray Painting | 1977 |
| Tiling | 1984 |
| Trouser Making | 1977 |
| Welding | 1977 |
| Woodcarving | 1977 |
| Woodworking Machine Operation | 1986 |

* *The Diploma in Applied Arts courses were transferred to the Temasek Polytechnic with effect from July 1990. The Product Design course was launched in 1988. The first output was in 1991 at the Temasek Polytechnic.*

## * COST OF TRAINING PER TRAINEE PER YEAR (FY86 — FY90)

| | FY86 | FY87 | FY88 | FY89 | FY90 |
|---|---|---|---|---|---|
| **Overall** | **$4,128** | **$3,863** | **$4,052** | **$4,560** | **$5,141** |
| **By Course Level** | | | | | |
| Diploma | $5,373 | $5,510 | $6,550 | $7,038 | — |
| ITC | $5,088 | $4,420 | $4,333 | $4,697 | $5,149 |
| CBS | $3,172 | $2,884 | $2,910 | $3,135 | $3,541 |
| NTC-2 | $5,291 | $5,063 | $5,033 | $5,519 | $6,411 |
| PCBS/COS + | $2,714 | $2,696 | $2,877 | $3,173 | $3,416 |
| NTC-3 | $5,044 | $5,171 | $5,000 | $5,637 | $6,376 |
| BST/BVT-2 + | $3,210 | $3,009 | $3,184 | $3,700 | $4,517 |
| PVT/BVT-1 + | $3,640 | $3,492 | $4,167 | $4,900 | $5,541 |

* *Excludes depreciation.*

\+ *The PCBS course was renamed COS wef July 1989.*
*The BST course was renamed BVT-2 wef January 1989.*
*The PVT course was renamed BVT-1 wef January 1989.*

## EXPENDITURE IN THE VITB ORDINARY BUDGET (FY86 — FY90)

| | FY86 | FY87 | FY88 | FY89 | FY90 |
|---|---|---|---|---|---|
| **Total** | **$71,337,453** | **$74,378,924** | **$80,884,387** | **$88,515,949** | **$92,363,094** |
| Expenditure on Manpower | $57,615,849 | $59,299,726 | $66,450,741 | $72,572,585 | $78,971,965 |
| Other Operating Expenditure | $13,721,604 | $15,079,198 | $14,433,646 | $15,943,364 | $13,391,129 |

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